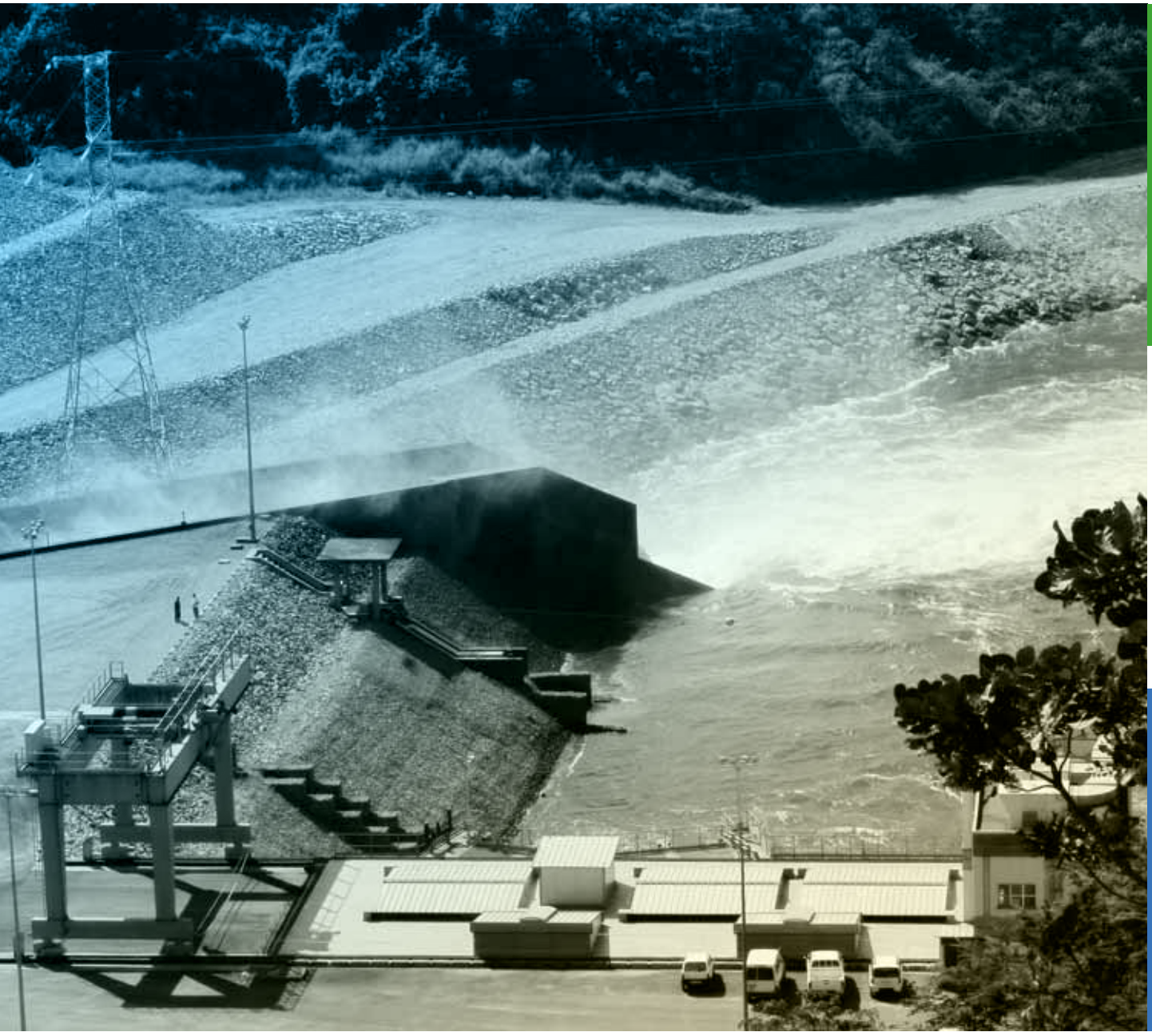
# INFRASTRUCTURE AND GROWTH IN SIERRA LEONE



African Development Bank

# FOREWORD

Fragile States, regional integration and infrastructure are at the heart of the African Development Bank's development agenda. Therefore, the Bank has launched a series of studies on the intersecting themes of infrastructure, regional integration and stability as they pertain to four West African states of Guinea, Guinea-Bissau, Liberia and Sierra Leone. Poor infrastructure is a critical barrier to accelerating growth, enhancing regional integration and reducing poverty in countries across the continent. Countries recovering from prolonged periods of conflict or poor governance face substantial added challenges which render them inherently more fragile and vulnerable.

The present Report, first of this series, concerns Sierra Leone. Infrastructure in Sierra Leone suffered badly from its decade of conflict, and even though the country has now preserved stability for almost a decade, the nation's stock of infrastructure remains inadequate and poorly maintained. There are, however, a number of opportunities to reverse this trend, especially if regional options are included. The ultimate objective of the Report is to offer recommendations for an infrastructure action plan for Sierra Leone. This plan takes its cue from Sierra Leone's national poverty reduction strategy, the ***Agenda for Change***, and adds in regional infrastructure development initiatives sponsored by the Economic Community of West African States of which Sierra Leone is a member. The infrastructure action plan seeks to: (i) prioritize infrastructure investments to maximize the benefits of internal integration and national stability, and (ii) prioritize infrastructure investments to maximize the benefits of regional integration for Sierra Leone. Together, these outcomes are expected to contribute in turn to regional stability. Important aspects of stability that are addressed include youth employment, measures to reduce food insecurity, the pro-poor management of natural resources and improved penetration of services into the hinterland. Many of these challenges can be better tackled and mitigated on a more enduring basis if they are addressed via synchronized national and regional initiatives.

Various studies have shown that increasing the stock of infrastructure adds to growth and the gross domestic product. In countries with severe infrastructure deficits, the economic return from infrastructure investment is even more favorable. Investments in infrastructure are critical to advances in agriculture and fundamental to human development, including the delivery of health and education services to poor people. In recognition of these facts, the development of Africa's infrastructure and economic integration are key components of the strategic direction pursued by the Bank.

This Report is important for four reasons. First, it provides the Government, the international donor community and the private sector with a detailed assessment of infrastructure investment opportunities in Sierra Leone. Second, it proposes an Action Plan for rehabilitation of infrastructure assets and improved delivery of infrastructure services in Sierra Leone in the decade ahead. In so doing, it helps to fill gaps where there is an absence of long term master planning. Third, the Report sensitizes readers to the particular challenges of extending infrastructure services and benefits to the broader Sierra Leone population, an outcome which is vital to securing Sierra Leone's stability for the long term future. Finally, it can be used as a basis of dialogue between Sierra Leone and neighboring states, both in the context of the Mano River Union and in the context of ECOWAS. The Bank is pleased to present this Report to Sierra Leone and trusts that it will contribute to the sustained recovery and acceleration of development progress in Sierra Leone.

*Aloysius Uche Ordu*

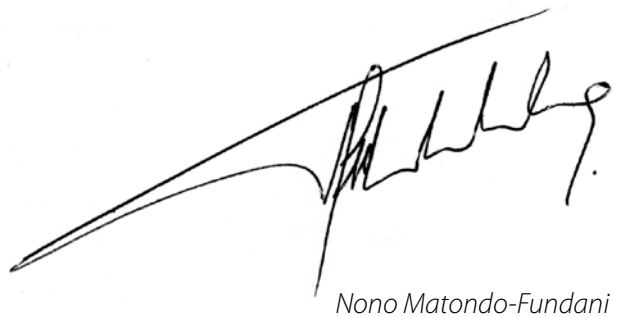
Vice President, Country and Regional Programs and Policy
**African Development Bank Group**

# PREFACE

In April 2011, Sierra Leone celebrated its 50 year anniversary as an independent state. The country had much to celebrate, especially the fact that peace has replaced conflict and has been maintained for close to a decade. Sierra Leone's poverty reduction strategy, the Agenda for Change recognizes that economic growth and development cannot be achieved without adequate infrastructure. At the same time, key insights from the nation's history indicate that the social and economic benefits of growth must be inclusive: infrastructure investment must be at both urban centers and in the rural milieu, and infrastructure services must strive to improve quality, availability and affordability to many citizens and not just a few.

The Report provides an assessment of the current status of infrastructure and services in the transport, electric power, ICT, water and sanitation sectors in Sierra Leone, together with the context of their participation in regional infrastructure development initiatives in the Mano River Union and ECOWAS. This full Report is divided into three chapters. Chapter one presents a diagnostic of the present situation including an analysis of determinants of past conflict and continuing vulnerabilities, indicators of social and economic performance, the status of infrastructure and the strategic policies guiding the nation. Chapter two takes a look ahead to evaluate areas of particular promise in the economy which could be expected to accelerate growth if binding policy and infrastructure constraints are addressed. Given the large uncertainty regarding future developments and data considerations, a scenario approach relying upon carefully defined selection criteria is employed rather than a forecasting approach. Chapter three presents base case and optional infrastructure investment plans that, together with accompanying measures, will help unleash the potential of promising growth sectors in the Sierra Leone economy. Each chapter is summarized in the present document. The Report is also available online at http://www.afdb.org/en/countries/west-africa/sierraleone.

The preparation of this Report was based on a broad stakeholder participation and consultation. This involved numerous rounds of interviews and consultations with Bank management and professional staff, Sierra Leone Government officials and key stakeholders between February and June 2011, including a consultative workshop to forge a consensus on priorities and actions. This Report is not the end of an initiative; it is a beginning. The African Development Bank looks forward to continued dialogue to develop sound new approaches to investing in infrastructure via means that bolster national stability and improve Sierra Leone's integration and prosperity in the region.



*Nono Matondo-Fundani*

Director (OIC), Regional Department West Africa 2 (ORWB)
**African Development Bank Group**

# ACKNOWLEDGEMENTS

This Report was prepared by a team of staff from the African Development Bank (AfDB) and consultants, led by Stefan Muller, Chief Country Economist, Regional Department West B (ORWB), who prepared the Terms of Reference, developed the Report's methodology and analytical approach, reviewed it at various stages and coordinated the preparation process.

The AfDB team comprised of: Jamal Zayid, Principal Country Economist, Elise Akitani, Senior Power Engineer, Jacques Moulot, Chief Power Engineer, Cecil Nartey, Principal Country Program Officer, Sheikh Sesay, Macroeconomist, Christian Tucker, Agricultural Expert, Ibrahim Wilson, Infrastructure Specialist, Richard Malinga, Senior Transport Engineer, Ali Yahiaoui, Chief ICT Officer, Jack Salieu, Chief Information and Telecommunication Engineer, Nirina Letsara, Statistician, Amel Feidi, Statistical Clerk, Christophe Baradandikanya, Database Administrator, and Kobla Ben Mili, Assistant.

The team of consultants was led by Andy Dijkerman, who is the prime author of the Report. She was assisted by Henry Yamba Kamara in the area of regional integration and international trade.

Special thanks go to Aloysius Ordu, Vice President, Franck Perrault, Director, Tim Turner, Director, Issa Koussoube, former Lead Economist, and Sam Onwona, AfDB Resident Representative, Sierra Leone, who provided feedback to the team. The team is also grateful for comments provided by Russell Cheetham, Lead Consultant of the Bank's Zimbabwe Infrastructure and Growth Flagship Report, and Emmanuel Akpa, Lead Consultant of the Bank's Liberia Flagship Report on Regional Integration.

The team appreciated the effort made by the Bank's Country Office (SLFO) in Freetown, Sierra Leone, to organize the Consultative Workshop in Freetown on June 24, 2011. The preparation of the Report also benefitted from comments, insights and generous support of other AfDB staff too numerous to mention, but by this acknowledgement, their contributions are recognized and the team's appreciation is registered.

The AfDB team expresses their gratitude to the Canadian Government for providing the funding to make this Report possible. The team also appreciated the support from Kazumi Ikeda-Larhed, Head of the AfDB's Partnership and Cooperation Unit, and her staff to ORWB in raising the funds needed for the preparation of this Report from the Canadian Trust Funds.

A large number of officials and representatives from the Government of Sierra Leone, state enterprises as well as development partners represented in Sierra Leone also provided extremely valuable inputs and comments on the Report, including during the Consultative Workshop held in Freetown on June 24, 2011. The list is not exhaustive, but the team is particularly grateful to the following key officials and representatives: Hon. Richard Konteh, Minister of Trade and Industry, Hon. Minkailu Mansaray, Minister of Mineral Resources, Hon. Alimamy P. Koroma, Minister of Works, Housing & Infrastructure, Hon. Hindolo S. Trye, Minister of Labour and Social Security, Hon. Abdul Ignosis, Deputy Minister of Mineral Resources, Hon. Osmond Hanciles, Deputy Minister, Ministry of Transport and Aviation, Hon. Alie B. Manasaray, Deputy Minister of Agriculture and Food Security, Hon. Sheka Tarawallie, Deputy Minister of Information and Communications, Yvette Stevens, Energy Policy Adviser, Ministry of Energy and Water Resources, Kawusu Kebbay, Director of Development Assistance Cooperation, Office of the Ministry of Finance and Economic Development, and Abie Kamara, Deputy Director of Development Assistance Cooperation, Office of the Ministry of Finance and Economic Development, Matthew Dingie, Director of Budget, Patrick Caulker, Chief Executive Officer, Sierra Leone Investment and Export Promotion Agency, Julius Kamara, Project Coordinator, West African Regional Communications Infrastructure Program, Sahr Sewo, Project Coordinator, ECOWAN Project, Nabilai Musa Kamara, Head of Policy and Ethics, Anti- Corruption Commission, John Sumailah, Acting Development Secretary. Also: Simeon Moribah, Deputy Secretary General, Mano River Union Secretariat, Vijay Pilai, World Bank Country Manager, Francis Kumah, IMF Resident Representative, Mia Seppo, UNDP Country Director, Masahiro Yoshikawa, Head of the Japan International Cooperation, Anne-Marie Callan, Charge d'Affaires, Irish Aid, Stephen Kargbo, Representative UNIDO, Philip Dive, Head of UN Strategic Planning Unit (UNIPSIL).

**Photo credits:** AfDB, Andy Dijkerman, EU All ACP Agricultural Commodities Programme. Map of Sierra Leone courtesy of Nations Online Project.



**Published by:**

The African Development Bank Group
Temporary Relocation Agency (TRA)
B.P 323-1002 Tunis Belvédaire, Tunisia
Tel.: (216) 7110-2876
Fax: (216) 7110-3779

Design and Layout:
BELMAKETT • info@belmakett.net



| | |
|---|---|
| **Vice President:** | Aloysius Uche Ordu |
| **Regional Director (at the time):** | Franck Perrault |
| **Lead Economist (at the time):** | Issa Koussoube |
| **Resident Representative (at the time):** | Sam Onwona |
| **Task Team Leader:** | Stefan Muller |
| **Lead Consultant:** | Andy Dijkerman |

# SUMMARY TABLE OF CONTENTS

# TABLE OF CONTENTS

# LIST OF TABLES

# LIST OF FIGURES



# LIST OF TEXT-BOXES

# ACRONYMS

| | |
|---|---|
| ACA | Anti-Corruption Act |
| ACC | Anti-Corruption Commission |
| ACE | Africa to Europe |
| APC | All People's Congress BKPS Bo-Kenema Power Station |
| CAADP | Comprehensive Africa Agricultural Development Program |
| CET | Common External Tariff |
| CLSG | Cote D'Ivoire, Liberia, Sierra Leone, Guinea Transmission Line |
| CPIA | Country Policy and Institutional Assessment |
| CRN | Core Road Network |
| CWIQ | Core Welfare Indicator Questionnaire |
| DFID | UK Department for International Development |
| DTIS | Diagnostic Trade Integration Study |
| ECF | Extended Credit Facility |
| ECOWAN | ECOWAS Wide Area Network |
| ECOWAS | Economic Community of West African States |
| EEZ | Extended Economic Zone |
| EITI | Extractive Industries Transparency Initiative |
| ETLS Scheme | (ECOWAS) Enhanced Trade Liberalization |
| EU | European Union |
| FDI | Foreign direct investment |
| FEWSNET | Famine Early Warning System Network |
| FOIA | Freedom of Information Act |
| GDP | Gross Domestic Product |
| GIABA | Inter-Governmental Action Group against Money Laundering in West Africa |
| GOSL | Government of Sierra Leone |
| GVWC | Guma Valley Water Company |
| HIPC | Heavily Indebted Poor Countries |
| IDA | International Development Association |
| IFAD | International Fund for Agricultural Development |
| IMF | International Monetary Fund |
| IMF | International Monetary Fund |
| ISRT | Inter-State Road Transport (Convention of ECOWAS) |
| JICA | Japan International Cooperation Agency |
| KWh | Kilowatt hour |
| LE | Leone, SL's national currency |
| MAFFS | Ministry of Agriculture, Forestry and Food Security |
| MDA | Ministries, Departments and Agencies (of Government of Sierra Leone) |
| MDB | Multilateral Development Bank |
| MDG | Millennium Development Goal |
| MEWR | Ministry of Energy and Water Resources |
| MFED | Ministry of Finance and Economic Development |
| MFMR | Ministry of Fisheries and Marine Resources |
| MRU | Mano River Union |
| MTI | Ministry of Trade and Industry |
| NATCOM | National Communications Commission |
| NCP | National Commission for Privatisation |
| NEPAD | New Partnership for African Development |
| NERICA | New Rice for Africa |
| NPA | National Power Authority |
| NRDS | National Rice Development Strategy |
| NRS | National Roads System |
| NSADP | National Sustainable Agriculture Development Plan 2010-2030 |
| NTC | National Transmission Companies |
| ODA | Official Development Assistance |
| PIU | Project Implementation Unit |
| PPP | Public Private Partnership |
| PRSP | Poverty Reduction Strategy Paper |
| PRU | Petroleum Resources Unit |
| PSD | Private sector development |
| PSP | Private sector participation |
| PURC | Public Utility Regulatory Commission |
| REC | Regional Economic Community |
| RUF | Revolutionary United Front |
| SALWACO | Sierra Leone Water Company |
| SLIEPA | Sierra Leone Investment and Export Promotion Agency |
| SLPP | Sierra Leone People's Party |
| TOCU | Transnational Organized Crime Unit |
| TRC | Truth and Reconciliation Commission |
| UNAMSIL | United Nations Mission in Sierra Leone |
| UNDP | United Nations Development Program |
| USAID | United States Agency for International Development |
| WAPP | West Africa Power Pool |
| WARDA | West African Rice Research Association |
| WFP | World Food Program |

# EXECUTIVE SUMMARY

## Overview and purpose of the report

The present Country Report constitutes one of a series of four country reports covering the fragile fringe countries of West Africa's, notably Guinea, Guinea-Bissau, Liberia and Sierra Leone, to inform a sub-regional umbrella "Flagship" report that will contribute an important component of the African Development Bank Groups' Regional Integration Strategy Paper ("RISP") 2011-2015 for West Africa. It is designed to serve as an advocacy instrument in support of the infrastructure development agenda of Sierra Leone, both in a national and regional context, which the country can use as an implementation roadmap and tool with its development partners at large.

This Country Report examines three major themes: **stability**, **regional integration** and the **infrastructure gap** in Sierra Leone. The issue of **stability** is a central concern and takes into account the extent of human harm and physical damage which the nation suffered during its decade of conflict. Consequently, awareness of Sierra Leone's current fragility and vulnerabilities informs subsequent analysis in the report, including the identification of promising growth options that could guide the country on a sound development path and support it to graduate from fragile state status in the future. The report assesses the current situation in the country and turns to the future to take a deeper look at promising areas which can offer growth taking into account domestic factors and plausible developments in neighboring countries.

It strives to identify development strategies which can generate a "second wind" of growth that Sierra Leone now requires. Three growth options are explored in depth, including those of the crops sector stimulated by trade, the ICT sector and the industrial mining sector.

**Regional integration** is examined in the context of promising growth options and vis-à-vis infrastructure investments that, together, can bring Sierra Leone out of its relative isolation. These will enable Sierra Leone to play a larger role on an agricultural trading stage within the Mano River Union, on a regional stage within the ECOWAS energy and communications markets and on a globally competitive stage as an attractive investment destination for the mining industry and long-lived infrastructure.

**Infrastructure** is vital to these strategies. Some investments should be undertaken on a purely national basis to further unify the nation, penetrate the interior with essential services or unlock pockets of productivity. Examples would be rural feeder roads plus a ring-road that unifies the country. At the same time, the report asserts that

some infrastructure should not be undertaken on a national or enclave basis and that a regional approach would offer more inclusive growth and a better multiplier effect both for Sierra Leone's population and that of its neighboring states, Guinea and Liberia. Examples would be rail and power infrastructure that could be scaled on a sub-regional basis to serve the mining sector as well as other uses. The report also identifies that capital flows would be easier to tap and of greater magnitude if national priorities were cast into and satisfied by participation in regional programs. Neither national nor regional infrastructure projects should be undertaken to the exclusion of the other—they should be planned in synchrony. At the same time, the report recognizes that Sierra Leone faces substantial fiscal constraints and the methodology is thus informed by realism. It avoids an approach of determining an exhaustive inventory of desirable infrastructure which, in a perfect world, would close the national infrastructure gap. Instead, the report seeks to identify the specific links between promising growth sectors and infrastructure that can unlock their potential. It also identifies essential versus optimal infrastructure investment packages, seeking to offer best value and informed choice in how the GOSL can best remove constraints to growth. For this purpose it begins by showcasing and drawing from government's own identified infrastructure investment plans. Where these are deemed inadequate or under-scoped, the report posits alternative or expanded investment scenarios that GOSL and development partners are encouraged to consider. It identifies accompanying measures for policy reform, maintenance and capacity building to ensure sustainability of investments.

# Issues of fragility, continuing vulnerability and implications for future growth strategies

As a recovering nation-state, Sierra Leone has been obliged to focus internally over the past decade. That focus has been on economic recovery and poverty reduction with an eye to reducing food insecurity, generating jobs for youth and other measures that will reduce the disparities between citizens residing in the capital versus those living in the rural interior. Nonetheless, the country remains vulnerable to continuing threats, notably a large segment of unemployed youth who are now urbanized, dislocated from the agricultural economy and highly impacted by price increases in staple commodities, especially rice. Other threats include trade in illicit drugs, corruption, regional insecurity and continuing disparity in the welfare of urban versus rural inhabitants. The persistence of inequality is an even greater risk to stability than "absolute" measures of poverty which have been decreasing. Thus, as Sierra Leone enjoys a recovering economy, it is critical for stability that the nation achieves a balanced distribution of gains both geographically and in terms of population segments since conflict could most likely be re-ignited by those dissatisfied with their relative standing in society. Because of the high potential cost of a return to conflict, the selection of promising growth areas is driven by key factors that start with economic "clout" and high latent potential to accelerate growth but go beyond. In addition, a broader set of filter criteria are applied to simultaneously factor in social inclusion, private sector participation and economic diversification as well as stimulate measures that will foster national and regional integration and deliver quick returns to the economy where feasible. With respect to time-frames, the study asserts that greater involvement in cross-border trade will soon provide stimulus to agricultural production and that expansion of the internet will also accelerate near term growth. On the contrary, it advocates for a more patient approach to mineral sector development so that a more inclusive approach can be developed in conjunction with neighboring states to yield longer term benefits of paving the way for transformation and industrialization in the sub-region.

Sierra Leone's continued stability also depends upon the nation regaining control over its macroeconomic balance to make steady progress towards fiscal independence. In this instance, the nation's vulnerability is not towards determinants of conflict, but towards sub-optimal development choices that arise due to a lack of fiscal space. The declared intention by the donor community to wean the nation off of budget support beginning after national elections in 2012 may appear as a looming threat. This has the likely effect of reducing GOSL room to maneuver and could encourage GOSL to contemplate development alternatives that bear increased risk. For example, embraced risks could range from prioritizing FDI flows without adequate regard for ethical reputation of their source, bartering indeterminate mineral wealth in exchange for present-day infrastructure or choosing to continue an enclave orientation towards mineral sector development which is less inclusive and beneficial to the population than could otherwise be the case. All of these risk-reward scenarios are presently

being contemplated by GOSL or are beginning to materialize. The study indicates that capital resources, financial leverage and affordability are more available under regional initiatives and encourages GOSL to consider how participation in regional projects may help the nation to better meet national development priorities and investment objectives. At the same time, development partners are encouraged to reconsider their pace of post-conflict disengagement from Sierra Leone considering that current commitments of approximately $120 million per year pale in comparison to the $2.6 billion that it cost to engage UNAMSIL to quell the nation's conflict and tackle its complex emergency.

# The current state of the economy, trade and policies in productive sectors

The economy hit bottom in 2000 and has shown encouraging signs of recovery thereafter. At the same time, output is only just at the stage of regaining the real level of GDP per capita produced in 1980 and the annual rate of growth is slowing down and is below GOSL targets. This emphasizes the need for a "second wind" to drive economic growth. With respect to macroeconomic governance, GOSL has worked diligently to modernize its public financial management and revenue mobilization systems in order to improve the delivery of basic public goods such as health, education and security. A 2010 review under the ECF concluded that prudent policy had prevented a deterioration of the macroeconomic situation following the global financial crises and the outlook is good.

Before the civil war, Sierra Leone had more breadth and diversity in its economy than is the case today. Previously, Sierra Leone was an established tourism destination and had a number of agro-industrial manufacturing plants. Not only was this infrastructure largely destroyed during the conflict but the country's tourism brand has deteriorated due to adverse publicity about the "blood diamond" conflict. These factors have caused a decline in exports and eliminated a major source of formal sector jobs as large employers were put out of business. Nonetheless, Sierra Leone has a comparative advantage in agriculture due to abundant rainfall and a varied ecosystem. This sector, comprising crops, fisheries, forestry and livestock has experienced substantial recovery in the post-conflict era and has been the main driver of economic growth contributing about 50% of GDP and 60% of livelihoods. Agriculture is the sector most able to tackle the twin priorities of increasing food security and income generation on a broad scale and, as such, its performance is critical to national stability and welfare. Constraints obstructing higher levels of crop production include declining soil fertility, insufficient input supply, unimproved seeds, lack of rural finance, insufficient processing equipment and poorly developed value chains connecting producers with markets. A shortage of post-harvest storage infrastructure, crop drying and sorting facilities plus rain-protected market installations present further impediments to the sector. In addition, the state and density of rural feeder roads is a major constraint, as is the lack of all-weather roads to link production zones with consumption centers which prevents farmers from effectively marketing their production surplus. Agronomists believe that Sierra Leone can become a major supplier of rice within ECOWAS if it can address its most binding constraints which presently include a lack of irrigation infrastructure permitting three crops a year in inland valley swamps. GOSL policy emphasis on reorienting smallholders from subsistence to commercial farming is appropriate.

The mining sector contracted during and after the war and GOSL deemed it essential for national security to de-emphasize this sector in the immediate post conflict era and to concentrate on revitalizing the agricultural and other sectors instead. At the same time, Sierra Leone has a rich endowment of precious, base and ferrous metals (including the largest known iron ore deposit in Africa) as well as rutile and other industrial minerals, the full extent of which is not even known as new discoveries continue to be made. Petroleum and gas have recently been discovered off-shore and measures are underway to evaluate these resources. Consequently, the mining industry is now poised for recovery and it has huge potential to expand above its current base of contribution to the economy. The present enclave mode of development whereby companies are obliged to be self-sufficient in infrastructure is not the most beneficial to the economy as a whole. Mining currently contributes 55% of exports and the IMF estimates that there will be a substantial one-time jump in domestic resource mobilization pertaining to mineral royalties that could multiply approximately ten-fold the contribution of this sector to the national budget. At the same time, it is suggested that GOSL may have awarded concession contracts with overly generous tax concessions which would probably not have been necessary to attract FDI. Looking to the future, it is recommended that Sierra Leone adopt a mineral-infrastructure cluster approach to developing the mining sector by participating with neighboring MRU States to establish multi-purpose infrastructure. While this could be scaled to serve different uses and many customers, it will also be an attractive inducement to FDI in the sector.

The communications sector has experienced substantial growth on the back of sector liberalization and the licensing of four private mobile operators who have entered alongside the national incumbent.

The sector is now poised for further growth with the introduction of broadband internet if accompanied by the critical adoption of an "open access" policy and de-monopolization of the national gateway.

Sierra Leone's trade sector exhibits a dichotomy between favorably sanctioned trade flows with developed countries and less-condoned engagement in cross-border trade. The trade balance is negative with exports on the rise and imports rising at an equal or faster rate. The conflict brought about a crushing decline in cash crop production and, apart from mineral exports which are reviving, only cocoa exports have begun to recover. Further competitiveness in tree crop exports is essential as a source of foreign exchange to enable GOSL to meet its import bill. Statistics are kept on global trade but are rarely captured with respect to regional trade and current domestic capacity to facilitate trade is extremely low. Consequently, regional trade remains largely informal and although there is brisk trade in food commodities, it tends to be associated with smuggling, corruption, money laundering and trafficking in drugs. Concerns about food security cause officials to frown upon and periodically ban the export of locally produced rice and palm oil even though the products are in high demand and exports give higher returns to smallholders. Though Sierra Leone aspires to become a surplus supplier of rice into ECOWAS, the GOSL reluctantly imports rice to meet the balance of domestic demand. Periodic prohibitions on trade reflect that GOSL equates food security with self-sufficiency and the study recommends a revision of this policy orientation. GOSL's concern pertains to the large swath of unemployed youth dislocated from the agrarian economy who are vulnerable to rising staple prices. Recommended measures to encourage greater formalization of regional trade and reduced cross-border smuggling are welcomed by Government. These would require further strengthening of GOSL regional trade policy plus regionally-supported investment in market infrastructure, common border facilities, upgraded road links plus capacity development for regional civil servants engaged in facilitating trade.

# The state of public and private sector capacity

The public sector was in decline prior to the war, suffered further damage thereafter and is now characterized as having few (10 to 12%) skilled employees, many under-skilled staff members and a "missing middle" of competent managers. These conditions have significant bearing upon the implementation of investment programs in the infrastructure sector and point to the need for approaches that (i) continue to bring in Diaspora or foreign technical assistance for sector reform and investment programs, (ii) arrange for on-the-job twinning and training to build capacity of local national counterparts and (iii) make recourse to infrastructure PPPs with substantial foreign involvement for both investment and operations. The indigenous private sector is equally ill-equipped to participate in infrastructure projects and complex PPPs and it is recommended that development partners continue to incentivize local participation through procurement but design implementation approaches to mitigate financing risks within contracts that arise for reasons outside of local contractors' control. At the same time, partners are encouraged to build capacity building measures for local PSP into projects and investment schemes through all appropriate means.

# The current state of infrastructure, sector policies and recommended improvements

Africa sits at the bottom in the global rank of infrastructure by continent and Sierra Leone is in the bottom tier therein. Government is very much seized with the need to redress this situation and is making infrastructure recovery a priority focus of domestic management. The review of productive sectors of the economy reinforces the clear conclusion that insufficient and poor quality infrastructure is a major constraint to current performance as emphasized by Sierra Leone's consistent ranking in the bottom six of the African Development Bank's "Africa Infrastructure Development Index".

The scale of Sierra Leone's infrastructure deficit has been compounded by a staggering rate of urbanization, whereby 38% of residents are now urban dwellers. A summary tour on the state of infrastructure, sector policies plus recommended improvements and investments is presented below.

**ROADS**

Sierra Leone's network of trunk and feeders roads is severely deteriorated and unable to provide all-weather access to key producing centers. This keeps agricultural producing areas isolated from the market economy and pulls tradable commodities across borders rather than into the interior or for global export through Freetown's port. The ECOWAS Southern Coastal Highway does not currently traverse the country;

the Western link to Guinea is under construction whereas financing is needed to complete the Eastern link to Liberia. The entire feeder road network plus 11,550 km in the core road network is under refurbishment or requires repair. A program of restoring previous functionality of the CRN is programmed to take until 2030 but this will not achieve an upgrade nor expand its functionality to better support cross-border trade or heavier road use by the mining sector. Better road links to key border crossings are included in the proposed infrastructure investment plan and officials are encouraged to contemplate how a sub-regional approach to mineral-infrastructure cluster development might enable greater investment to upgrade key road arteries to asphalt-concrete standard. Sierra Leone is encouraged to adopt ECOWAS policies on road use standards and axle-load controls and to exercise vigilance in allocating Road Fund receipts to continued maintenance of the core road network.

## POWER

The past decade has been devoted to emergency reconstruction of electrical power to the Western Area but the nation still lacks a national grid and the electrification ratio is below 10%. With the completion of Bumbuna I hydro-power facility in 2010, the country jumped from 13 to 63 MW of installed capacity which will be adequate to supply household demand once transmission lines are in place to absorb the generated volume. Future demand will emanate from the mining sector far beyond the capacity potential of Bumbuna I to supply it and this explains GOSL preoccupation to build a Bumbuna II extension and further expand generation. At the same time, participation in the West African Power Pool through the installation of a cross-regional transmission line linking Cote D'Ivoire, Liberia, Sierra Leone and Guinea (CLSG) could equally solve Sierra Leone's medium term power demands if the country chose to be an active participant in the West African energy market and import power for some time to come. The advantage of the CLSG transmission line is that it will provide an attractively located backbone off which to expand the domestic grid. This regional project will give Sierra Leone the option of changing the sequence of further national investment in national power sector infrastructure, enabling the nation to prioritize expansion of the national distribution grid if it could accept to import from the ECOWAS energy market for a while. When Bumbuna II and other downstream hydro-power projects are eventually realized, the financial risks to Sierra Leone will be reduced because since excess supply will have an immediate outlet for sale into ECOWAS' regional energy market. This will make the conditions for private investment by independent power producers more attractive. At present, however, Bumbuna power is supplied at excessively high cost to National Power Authority (NPA, the sector's incumbent state-owned distribution company) as a consequence of poor governance which resulted in a lack of adequate competition in installing a management contractor to operate the plant.

This problem is becoming recognized and GOSL intends to address the situation. Concurrently, NPA's own operating costs are also excessively high, giving rise to the highest cost electricity within ECOWAS. NPA is severely run-down, suffering from a high (21%) rate of technical losses due to deteriorated power lines, an equivalent degree of theft and a low collection rate. There is no short-cut other than to rehabilitate and restructure NPA so that it can serve the nation while an urgent and wide-ranging power sector reform program gets simultaneously underway. Power sector reform will be preceded legislative reform (in preparation) and will likely include unbundling of generation, transmission and distribution, but these should be considered in the context of Sierra Leone's participation in a regional power market. In contemplating its need for regulation, Sierra Leone is encouraged to consider an affordable multi-sector regulator model and build power sector competency into an existing institution such as NATCOM.

## ICT

Sector liberalization and licensing of private entrants into mobile telephony has expanded telecommunications service to 38% of Sierra Leone's population and demand in the voice market has been growing at double digit rates. Internet penetration is, however, exceedingly low at 0.3% and the cost of service is extremely high. Sierra Leone is eagerly responding to ECOWAS' call for creating a regional ICT market through a strategy of establishing links to a new submarine fibre-optic cable, closing "missing links" between countries and creating a VPN to connect area leaders with the ECOWAS commission through ECOWAN. Sierra Leone has lined up partner financing for most of these endeavors but will go further to devote equivalent emphasis on building out the terrestrial backbone to supply broadband into the interior. The aspiration is that a certain degree of public sector investment will create the conditions for the private sector to continue terrestrial expansion and improve density of coverage in the interior. This will be more likely to happen if the country moves swiftly ahead with the adoption of an "open access" policy regime and de-monopolization of the international gateway.

## WATER

An estimated 83% of urban residents have access to improved water supply but two-thirds of the rural population does not have equivalent access. An estimated 11 % of the population has access to septic tanks while 76 % use pit latrines. Untreated sewage is discharged into the ocean leading to coastal pollution and it is clear that broader gains in quality of water and sanitation services will decrease morbidity and exert a beneficial impact on HDI indicators. MDBs have made water supply and sanitation a priority within their programs and plans are underway to help the GOSL

implement a new sector strategy. As these needs are slowly being addressed, the study has identified a priority need for supplemental investment in irrigation infrastructure to enable Sierra Leone to overcome a dependence on rain-fed agriculture and tap its comparative advantage in rice production by improving the productivity of land in the inland valley swamp system. Because the private sector has been slow to invest in irrigated production, GOSL is planning modest public investment to demonstrate its greater potential and that investment has been included in the study's recommended investment plans to facilitate Sierra Leone's greater engagement in regional trade. At the same time, Government is encouraged to reflect on whether the land-leasing and investment incentives scheme to overcome the non-availability of freehold land is eliciting the desired degree of response.

### TRADE INFRASTRUCTURE

Sierra Leone witnessed the destruction of several regional markets during the conflict and once-vibrant regional trading hubs have contracted. The country's first common border facility is being established to serve the upgraded trade corridor with Guinea along the Southern coastal highway, but the nation would benefit from regional collaboration to establish more such facilities plus supportive market centers at two other sites up country as well as Bo Waterside next to Liberia.

### AIR, PORT, RAIL, BRIDGE AND RIVER TRANSPORT

The report undertakes a brief situation assessment with respect to these sectors and notes that the country would gain benefit from improvements in each of these types of transport infrastructure. Yet, GOSL has done little to date to flesh out the investment priorities among them and Government is encouraged to identify the specific investment projects and potential cost of upgrading these infrastructure sectors. A major exception is the TIP project which represents a tri-partite infrastructure package that would seek to upgrade or install a new international airport to serve the capital, a bridge that would connect Freetown to the Lungi peninsula and implant the nucleus of a new administrative capital and thereby reduce the congestion pressure on the capital. This is deemed a priority by government particularly as it would relieve a binding impediment to FDI.

Sierra Leone's position in the Africa Infrastructure Development Index

| AIDI | Rank | Country | 2006 | Rank | Country | 2007 | Rank | Country | 2008 | Rank | Country | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Top three | 1 | SEYCHELLES | 100 | 1 | SEYCHELLES | 100 | 1 | SEYCHELLES | 100 | 1 | SEYCHELLES | 100 |
| | 2 | MAURITIUS | 92.4 | 2 | MAURITIUS | 92.5 | 2 | MAURITIUS | 89.9 | 2 | MAURITIUS | 90.4 |
| | 3 | SOUTH AFRICA | 81.3 | 3 | SOUTH AFRICA | 82.3 | 3 | SOUTH AFRICA | 81.2 | 3 | SOUTH AFRICA | 81.8 |
| Bottom six | 48 | MADAGASCAR | 5.7 | **48** | **SIERRA LEONE** | **5.2** | 48 | NIGER | 5.8 | 48 | NIGER | 6.8 |
| | **49** | **SIERRA LEONE** | **3** | 49 | D.R. CONGO | 3.9 | **49** | **SIERRA LEONE** | **5.1** | 49 | CHAD | 5.1 |
| | 50 | ETHIOPIA | 2.4 | 50 | NIGER | 3.3 | 50 | D.R. CONGO | 4.9 | **50** | **SIERRA LEONE** | **4.9** |
| | 51 | NIGER | 1.9 | 51 | ETHIOPIA | 1.5 | 51 | CHAD | 2.4 | 51 | D.R. CONGO | 4.9 |
| | 52 | SOMALIA | 0.3 | 52 | CHAD | 0.8 | 52 | ETHIOPIA | 1.1 | 52 | ETHIOPIA | 4 |
| | 53 | CHAD | - | 53 | SOMALIA | - | 53 | SOMALIA | - | 53 | SOMALIA | - |
| Other MRU Nations | 28 | COTE D'IVOIRE | 22.3 | 25 | COTE D'IVOIRE | 24.5 | 25 | COTE D'IVOIRE | 25.7 | 28 | COTE D'IVOIRE | 27 |
| | 32 | GUINEA | 17.7 | 29 | GUINEA | 21.8 | 28 | GUINEA | 24.7 | 21 | GUINEA | 29.7 |
| | 37 | LIBERIA | 13.8 | 42 | LIBERIA | 13.6 | 42 | LIBERIA | 12.6 | 43 | LIBERIA | 13.2 |

Source: The Africa Infrastructure Development Index, Economic Brief volume 1 Issue 1, African Development Bank, 25 april 2011

# Promising areas for future growth

As described above in the discussion of fragility, filter criteria were applied to identify sectors within Sierra Leone's economy with high latent potential to reduce poverty and deliver a critical "second wind" of growth. Three direct areas are identified by the study, together with development strategies and infrastructure solutions that aid acceleration. Crop agriculture is selected because of its high potential to generate livelihoods and capacity to achieve higher productivity and output under enhanced conditions. The study asserts that greater engagement in two directions of trade—global and regional—will both serve to stimulate value chain development, higher output and youth-absorbing job creation in this sphere of the economy. It also identifies the tremendous potential offered by closing the digital divide between Sierra Leone and the world. By expanding the supply and lowering the cost of broadb and internet, studies have shown a direct correlation between improved communications infrastructure and economic growth and there are many spheres in which this is equally applicable to Sierra Leone. The study also identifies that growth in the mining sector was appropriately downplayed in the immediate post-conflict era but that new discoveries and the presence of abundant minerals in Liberia and

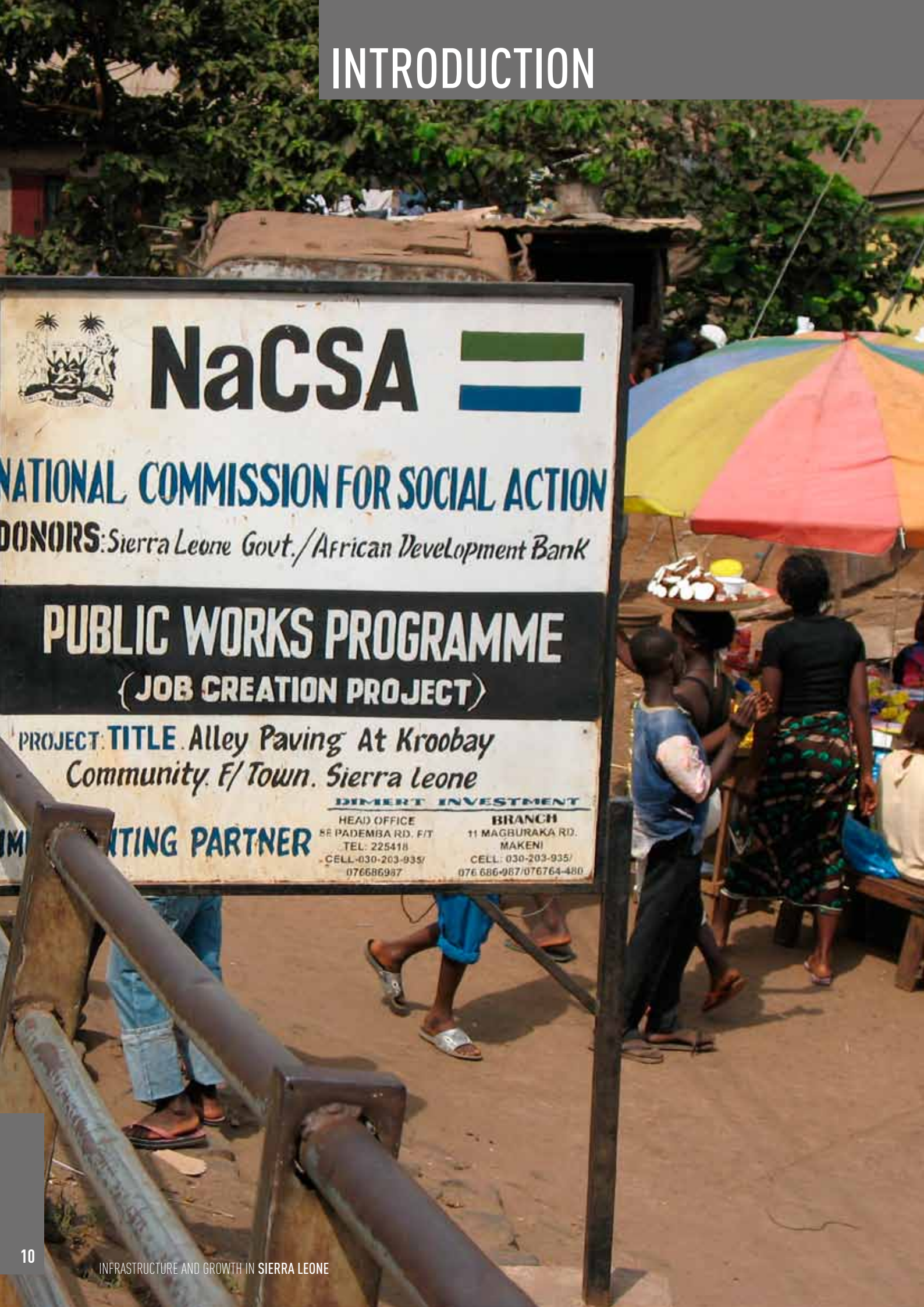
Guinea dictate that the minerals sector has a major contribution to make to the future welfare of these countries. The report encourages GOSL to re-evaluate the current enclave approach to mining sector development and consider an alternative sub-regional approach to developing mineral clusters through cooperation in larger scale multi-use infrastructure combined with a vision to foresee the potential of downstream transformation and industrial development in the sub-region.

# Infrastructure investment packages plus accompanying measures for an action plan

The final chapter of the report turns to detailed identification of infrastructure investment packages (IIPs) and accompanying measures that could release the desired second wind of growth in Sierra Leone. Four distinct investment scenarios are presented and, to the extent possible, the costs are identified. The four IIP scenarios include one to expand crop production oriented towards global trade, one that would help expand crop and agro-industrial processing to produce products for local and regional trade, a scenario to close the digital divide and launch Sierra Leone into the internet age and a final scenario to introduce mineral-infrastructure cluster development to be undertaken with MRU neighbors Guinea and Liberia. The estimated total cost of all IIPs for which cost estimates are available comes to US$2.5 billion, for which a financing gap of $1.37 billion currently exists. GOSL is encouraged to estimate costs and confirm the priority of un-costed elements. Several of the projects identified serve a dual purpose of meeting a national investment priority while also serving to integrate Sierra Leone further into ECOWAS and the MRU. This provides a baseline off which GOSL can express and advocate its needs within ECOWAS, to NEPAD and the AU and to elicit the continuing support of development partners and the private investment community at large on its path to recovery, stability and prosperity ■

# Figure 1: Administrative map of Sierra Leone

# INTRODUCTION



# INTRODUCTION

On April 27, 2011, Sierra Leone celebrated its 50 year anniversary as an independent state. The country had much to celebrate; most notably that peace had been maintained for close to a decade and the nation has been able to focus on socio-economic recovery. But the pillars of stability remain fragile, encouraging a pause for reflection both forward and back at this auspicious time in the nation's history.

The present Country Report constitutes one of a series of four country reports covering the fragile fringe countries of West Africa, notably Guinea, Guinea-Bissau, Liberia and Sierra Leone, to inform a sub-regional umbrella "Flagship" report that will contribute an important component of the African Development Bank Groups' Regional Integration Strategy Paper ("RISP") 2011-2015 for West Africa. It is designed to serve as an advocacy instrument in support of the infrastructure development agenda of Sierra Leone, both in a national and a regional context, which the country can use as an implementation roadmap and tool with its development partners at large. This country report for Sierra Leone identifies priority infrastructure investments that could maximize the benefits of internal integration and stability as well as those which will maximize the benefits to Sierra Leone and the Economic Community of West African States (ECOWAS) of greater regional integration.

This Report examines how investment in infrastructure can make a contribution towards national stability and towards regional integration. It assumes that stability and integration are each a desirable objective to be pursued in their own right but recognizes that advancement towards both can be mutually reinforcing. It identifies situations where investment in national infrastructure can enhance stability and, through this, pave the way for greater integration of Sierra Leone within the Economic Community of West African States (ECOWAS). Likewise, it identifies opportunities where regional infrastructure investment can advance stability both in the nation and in the surrounding region.

**Chapter 1** takes a retrospective look from past to present. It examines Sierra Leone's political, economic and social history including a look at the causes of fragility and continuing factors of vulnerability. It reviews the socio-economic situation today together with the status of trade and infrastructure to identify the relative performance of economic sub-sectors as potential drivers of growth. It appraises Government's strategic and policy frameworks, including the role of national and regional infrastructure in the strategy to reduce poverty. The chapter concludes by examining Sierra Leone in the context of its own unique challenges as well as its role in the sub-region, including the opportunities and threats presented by its regional context.

**Chapter 2** takes a forward look and analyzes how the country might evolve and grow over the long term under different sets of assumptions. It identifies areas of particular promise within the economy which, if enabled to address their binding policy, structural and infrastructure constraints, could be expected to catalyze new momentum in economic growth. These areas include agricultural crop production stimulated by global and regional engagement in trade, ICT and development of industrial mineral-infrastructure corridors. Chapter 2 adds in the dimension of Sierra Leone's potential as a West African state which is at once a member of the Mano River Union (MRU) and also a member of ECOWAS. Key questions arising in this context are: How might Sierra Leone evolve and grow given a wider regional context for economic integration? How might an inter-dependent perspective and investment plan for sub-regional trade and infrastructure unleash a flow of benefits which surpasses that which can be gained by national initiative alone? What scenarios might best tap the strengths, assets, and comparative and competitive advantages of Sierra Leone to the benefit of the country itself as well as the region? This approach strives to shed light on those factors that will bolster the nation's stability, the prosperity of the country and that of its neighbors to assist Sierra Leone to achieve its national poverty reduction goals.

**Chapter 3** departs from the analyses undertaken in chapters 1 and 2 and proposes corresponding priority support packages ("scenarios") for the medium term which redress binding constraints, including infrastructure deficits and sector reforms that are holding back growth in the areas of promise. This chapter develops complementary Action Plans of "soft" measures, focusing on private and public sector capacity building and on putting in place conducive policy, strategic and regulatory frameworks, in order to establish an adequate environment for the implementation of the infrastructure packages. It identifies and articulates both base case and optimal investment packages which will launch Sierra Leone towards its desired stretch target of 10% recurrent annual GDP growth over a prolonged period in order to raise the standard of living for the majority of its people ■


SUMBUNA FALLS HYDROELECTRIC PROJECT
Phase I - 50 MW
Phase II - 160 MW

CHAPTER 1

# DIAGNOSTIC OF THE CURRENT SITUATION

# CHAPTER 1

# DIAGNOSTIC OF THE CURRENT SITUATION

## 1. Issues of fragility in Sierra Leone

This section examines Sierra Leone's decade of conflict to build understanding of the factors which contributed to instability in the first place and to identify areas of continuing vulnerability which should inform the nation's future development path. As the nation carves its way forward, it will face numerous policy and investment alternatives which, in the presence of scarce resources, need to be prioritized to better raise the welfare of Sierra Leone's people and prevent a resurgence of conflict. By illuminating the issues of fragility affecting the country, change agents can make wise choices which serve to mitigate areas of vulnerability and support a pro-poor growth path that improves the prosperity of the nation.

### HISTORICAL OVERVIEW OF POLITICS AND CONFLICT

At independence in 1961, Sierra Leone was an African state with a respectable endowment of human, physical and economic capital and good prospects for success. The country had a large corps of educated professionals in civil service, many of whom had been educated at Fourah Bay College, the earliest university institution established in 1928 in Sub-Saharan Africa. The economy had an ability to generate foreign exchange from cash crops and export of alluvial diamonds which had first been discovered in the 1950s. Ethnically, the country enjoyed a blend of about twenty-five ethnic groups including a reasonable balance of Mende in the south, Temne in the north and Creoles descended from liberated African slaves in coastal areas. No one group constituted an absolute majority and, "there was no unbridgeable ethnic divide.[1]

1 Clapham Christopher. *Sierra Leone: The Political Economy of Internal Conflict*, Clingendael 'Working Paper' July 2003, page 9.

The country began independence with two major political parties, the Sierra Leone People's Party (SLPP) with Southern support and the All People's Congress (APC) whose base of support was in the North. The first Prime Minister was Milton Margai of SLPP but he died in 1964. Initially succeeded by his brother Albert Margai, subsequent elections passed authority to the APC led by Siaka Stevens in 1967. The military coup which immediately aborted that victory marked the beginning of a pattern of degenerate governance. Despite successive alternations between civilian and military rule, (see Political Milestones Box), it was not until March 1991 that the Sierra Leonean state essentially collapsed and the country descended into a brutal civil war. Sierra Leone became, for one full decade, a "failed" state, unable to meet the needs of its people.[2]

By the early 1990s, the Sierra Leone economy had already been in steep decline. Real GDP growth averaged 1.8% between 1974 and 1984 whereas concurrent population growth was averaging over 2% so that by 1991 real per capita GDP had declined by 12.36% as compared to the level prevailing at independence.[3] Hence, although conflict was initially sparked by attacks from armed Liberian groups (including Charles Taylor), domestic concerns became the fuel which sustained the conflict and caused civil war to rage for eleven years, systematically targeting the civilian population and destroying the traditional fabric of Sierra Leone society. By the end of the war in January 2002, about one-third of Sierra Leone's 5.4 million people had been displaced and the average citizen was struggling to survive on US$0.38 per day.[4]

It is important to understand the root causes of conflict in order to prevent their recurrence. Although some have classified Sierra Leone's as a "resource-driven" conflict due to greed for diamonds, other scholars[5] as well as the Truth and Reconciliation Commission[6] (TRC) dismiss this as too simplistic. It seems valid to conclude that the precipitating causes were poverty and exclusion of both the young and the poor brought about by years of poor governance. Corruption and inequality were rampant, reflecting a state focused on the welfare of Freetown and very little attention paid to the hinterland.

Over the past nine years, Sierra Leone has begun its climb back out of the abyss. The country can take great pride that peace has been sustained and impressive strides have been taken to become a working democracy. In August 2007, successful elections delivered a peaceful change in Party leadership and, to date, the SLPP and APC demonstrate a respectful partnership working towards national stability and economic progress. This was put to a recent test when clashes between APC and SLPP supporters broke out on March 16, 2009 and the SLPP headquarters was ransacked. With UN assistance, the conflict was quelled and, more

## Box 1.1: Political milestones since Independence

| | |
|---|---|
| **1961-64:** | SLPP Prime Minister Milton Margai, died '64 and succeeded by brother Albert Margai |
| **1967:** | APC led by Siaka Stevens wins election |
| **1967:** | Military coup sets up National Reformation Council |
| **1968:** | Military mutiny leads to reinstallation Siaka Stevens |
| **1968-1985:** | Siaka Stevens rules the country first as Prime Minister, then as President; moves towards single party rule in 1978 and abolishes local government administration |
| **1985:** | Stevens retires; handpicks successor army commander Joseph Momoh |
| **1991:** | Revolutionary United Front attack village in E. Sierra Leone from Liberia, sparking events that lead to civil war |
| **1992:** | Junior officers overthrow Momoh; install National Provisional Ruling Council, led by Captain Valentine Strasser |
| **1995:** | NPRC hires S. African mercenaries to contain RUF |
| **1996:** | Strasser ousted in palace coup by Captain Maada Bio |
| **1996:** | Multi-party elections won by Ahmed T Kabbah, SLPP |
| **Nov 96:** | Abidjan accord; EO withdraws & RUF becomes Party |
| **May 97:** | Kabbah overthrown by RUF & exiled to Guinea. Nigerian ECOMOG troupes oust RUF and reinstall Kabbah |
| **Jan 99:** | RUF seize Freetown, ECOMOG repels |
| **July 99:** | Peace treaty signed in Lomé, RUF leader Foday Sankoh became VP with responsibility for mineral resources. UN peacekeepers UNAMSIL brought in for demilitarization |
| | Settlement lasted till May 2000 when RUF seized UN troop hostages on day of ECOMOG/UNAMSIL handover. |
| | British troops sent in; stabilize situation |
| **Jan 2002:** | Peace agreement & return to civilian rule; Kabbah returned to leadership via elections. |
| **2007:** | Successful elections transfer power peacefully from SLPP Kabbah to APC and Ernest Koroma becomes President. |

## Box 1.2: Conclusions of Sierra Leone's Truth and Reconciliation Commission

"The Commission finds that the conflict and the post-independence period preceding represent the most shameful years of Sierra Leone's history. These periods reflect an extraordinary failure of leadership on the part of all those involved in government, public life and civil society. The Commission finds that the central cause of the war was endemic greed, corruption and nepotism that deprived the nation of its dignity and reduced most people to a state of poverty. … Government accountability was non-existent. Institutions meant to uphold human rights, such as the courts and civil society, were thoroughly co-opted by the executive. … Many Sierra Leoneans, particularly the youth, lost all sense of hope in the future. Youths became easy prey for unscrupulous forces who exploited their disenchantment to wreak vengeance against the ruling elite. The Commission holds the political elite of successive regimes in the post-independence period responsible for creating the conditions for conflict."

2 A "failed" state is one which is unwilling or unable to deliver services to its people, whereas a "fragile" state is one "unable to meet its population's expectations or manage changes in expectations and capacity through the political process." *Concepts and Dilemmas of State-Building in Fragile Situations: From Fragility to Resilience*, OECD Journal on Development 2008, Volume 9, No. 3

3 African Development Indicators, World Bank

4 *Sierra Leone: From Conflict to Democratic Rule*, IDA at Work Paper # 52002, August 2009

5 Clapham, IBID. The Truth and Reconciliation Commission was established as a condition of the Lome Peace Accord in July 1999 and it operated from November 2002 to October 2004.

6 *Truth and Reconciliation Commission Report*, Volume 2, Chapter 2, Page 27

importantly, the parties issued a joint communiqué to the effect that acts of political intolerance must cease and the parties will work together to disband the military youth wings.[7] This functioning democracy is one of Sierra Leone's most precious strengths and assets. It must be preserved and cultivated. Because of this, Sierra Leone has graduated to being "fragile" and is on the road to recovery.

## SIERRA LEONE'S CONTINUING VULNERABILITY TO DETERMINANTS OF CONFLICT

Sierra Leone must continue to make rapid, broad-based progress if it is to avoid a resurgence of factors which were original contributors to conflict. In that regard, there are six distinct vulnerabilities which bear particular mention: the youth employment situation, illicit drugs, corruption, inequality, food insecurity and the regional context of security or instability. Without a doubt, these risk factors and fragile attributes of the Sierra Leone state must be factored into national and regional integration planning scenarios for the future. Together, the prevalence or absence of these factors will help to determine Sierra Leone's political stability but this alone is not sufficient to declare the country "stable." Macroeconomic stability is another dimension which must be nurtured for the country to move confidently beyond an era of conflict and into a future that provides opportunity for the nation's population.

### YOUTH

Life expectancy is extremely low in Sierra Leone and youth aged 24 and below constitute approximately 63% of the population. Prior to the conflict, the economy began to stagnate and failed to generate jobs capable of offering opportunity to youth. Estimates are that 70,000 young people became involved in the civil war, some through recruitment and others through abduction and coercion. Regardless, this segment became a "lost generation" who missed out on an education and for whom the lack of employment remains a serious problem, both for their welfare and for that of the nation. Under Sierra Leone's youth policy, "youth" is defined to include all persons below 35 years of age since this generation lost their younger years to the conflict and they have a critical need for remedial education and vocational training. It is estimated that the 15 to 35 age bracket accounts for 34% of the population and up to 800,000 between 15 and 25 are presently unemployed, unpaid or underemployed. For the economy to generate jobs and become able to absorb this stock of labor, it is estimated that Sierra Leone would have to achieve a 7% annual growth rate for the next ten years.[8] Meanwhile, idle youth represents a serious political and security risk as Sierra Leone's own history proves how they can be manipulated for negative purpose.

### ILLICIT DRUGS

Regrettably, failed and fragile states represent fertile territory for the operation of transnational crime syndicates organized to ply the drug trade. Sierra Leone has been particularly targeted in this respect so the security sector has had to make the fight on this front a national priority. Cocaine traders and drug syndicates are periodically apprehended or chased away by law enforcement units, and yet the trade reappears intermittently to traffic drugs out of Freetown. Because of the regional nature of this threat, Sierra Leone converted its Drug Interdiction Task Force into a Transnational Organised Crime Unit (TOCU) in 2010 with expertise from different law enforcement sectors pooled into the one unit. The risk posed by the drug trade is problematic vis-à-vis an idle youth population and it presents an additional cost and strain on the country's stretched security apparatus.

### CORRUPTION

Because corruption was regarded as a precipitating contributor to conflict, the TRC placed emphasis on fighting corruption as an "imperative" for action. Initial progress on this front in the post-conflict era was slow however, and criticisms expressed early in the Koroma regime were that there were more slogans than action. This appears to have been taken to heart as the authority granted to the Sierra Leone Anti-Corruption Commission ('ACC', established in 2000) was upgraded with the passage of the 2008 Anti-Corruption Act (ACA), giving it wider scope for action and clarifying penalties and prison terms for corruption crimes. Sierra Leone's corruption "score" was assessed as 2.2 in 2003 when the country was first assessed by Transparency International (ranking 113 during that year) but improved to 2.4 in 2010. This reflects a slight climb in assessed score though it is a drop to 134 in the relative rankings reflecting that other countries are making faster progress on this front than Sierra Leone.[9]

Recognizing that the principal tactic for concealing ill-gotten wealth is through assets acquisition, the ACA made asset declaration mandatory for all public servants and His Excellency the President opted to be the first declarant in 2010. This example of leadership resulted in asset declaration by 17,000 other public servants. Perhaps the most encouraging sign from a national stability perspective is that The Global Corruption Barometer conducted by Transparency International found that 64% of Sierra Leoneans believed that the government's efforts to fight corruption were effective with 25% still believing it to be ineffective, while the Global Integrity Indicator Scorecard gave the Commission and the Act "80%", showing that there is progress even though challenges still remain. Table 1.1 presents a scorecard on recent activity with respect to Sierra Leone's efforts to prosecute corrupt practices.

7 *Draft Joint Progress Report on the Agenda for Change January 2009-June 2010*, 12 August 2010
8 Project Information Document Report No. AB 5698 "Youth Employment Support Program" World Bank, April 2010.
9 Transparency International Corruption Perceptions Index, www.transparency.org

The illegal smuggling of diamonds remains a concern and even though official exports surged from $26 million in 2002 to over $100 million in recent years, annual production is estimated to be worth $250 to $300 million. This suggests that 50% or more is still passing through unofficial channels due to endemic corruption, leaving the country vulnerable to money laundering and the threat that illegal gains could be used to finance insurrection or terrorism.

## INEQUALITY

As has been noted, poverty was a contributing factor to Sierra Leone's civil conflict but this was exacerbated by the obvious inequality between populations living an urban existence in the capital versus those living in the rural milieu. Few utility services were available to citizens outside of Freetown, Bo and Kenema. Sierra Leone's administrative map presented in Figure 1 on page 9 identifies the diminutive size of Western Area as compared to the provinces and this helps to place the observations about inequality into context.

Poverty statistics in Table 1.2 identify both a high level of inequality and an urban-rural divide. A Core Welfare Indicator Questionnaire administered in 2007 established five quintiles of relative poverty or welfare prevailing in the country, with the top two quintiles representing those at the top of the welfare pyramid and the bottom three approximating those living at various degrees below the national poverty line. This data reveals that Western Area has, without doubt, the lowest prevalence of poverty, but more stark is the fact that there is a rural and urban divide within Western area with rural Western area residents among the poorest in the country. This reflects the phenomenon of urban migration without job creation, whereby relocation to the capital has been accompanied by dislocation from the agricultural economy. Residents on the rural periphery outside Freetown do not have farming to fall back on to generate income and so the bottom quintile is particularly vulnerable to absolute poverty, chronic hunger and malnutrition.

Sierra Leone's Gini coefficient, reflecting national income inequality was measured as highly unequal at 68.7 in 1989 prior to the conflict.[10] It was re-estimated to be 37 when most recently measured in 2003.[11] This is undoubtedly an improvement, but it still indicates that 49.3% of income was attributable to the top 20% of the population, revealing why the issue of inequality remains a factor leaving the nation vulnerable to resumed dissatisfaction. The persistence of inequality is a major risk to stability, even more so than measures of "absolute" poverty which are deemed to have decreased from 66% in 2003/4 to 57% in 2008[12]. Consequently, as Sierra Leone enjoys a period of recovering economic growth, it is most critical for stability that the nation achieves a balanced distribution of the resulting gains since conflict is most likely ignited by population segments dissatisfied with their relative standing in society.

## FOOD SECURITY AND THE SECURITY OF RICE SUPPLY

When Sierra Leone's conflict came to an end, one third of the population was displaced, poverty was extreme and food insecurity was a most severe problem. The nation had, and still has, some of the highest rates of malnutrition in the world.

### Box 1.3: Recent ACC prosecutions

- Ombudsman of SL convicted on 164 count indictment of misappropriation of public funds;
- Former Minister of Health and Sanitation indicted Nov 2009 by ACC on breach of procurement procedures
- Former Director General of SL Broadcasting Service convicted of misappropriating of government funds.

### Table 1.1: Corruption cases 2006 - 2010

| Actions | 2006 | 2007 | 2008 | 2009 | 2010* |
|---|---|---|---|---|---|
| Total cases investigated | 64 | 33 | 86 | 122 | 117 |
| Cases concluded | 12 | 5 | 10 | 24 | 9 |
| Cases closed | 29 | 8 | 22 | 24 | 19 |
| Cases continuing | 23 | 20 | 45 | 59 | 87 |
| Cautioned | | | 8 | 10 | 1 |
| Convictions | 9 | 1 | 4 | 11 | 6 |
| Funds Recovered (Million Leones) | | | 771.6 | 1790.6 | 1038.3 |

Source: Joint Progress Report on the Agenda for Change, 2010.
* Data through July 2010

### Table 1.2: Percent distribution of households by welfare quintile by province

| | Rank | 3 Bottom Quintiles | 2 Top Quintiles |
|---|---|---|---|
| Northern | 1 | 56.1 | 43.9 |
| Southern | 2 | 55.8 | 44.2 |
| Eastern | 3 | 53.6 | 46.6 |
| Western | 4 | 40.2 | 59.8 |
| Western Urban | | 36.1 | 63.9 |
| Western Rural | | 58.3 | 41.7 |

Source: CWIQ Survey, November 2007, DfID & GOSL

10 Under the "Gini Coefficient", 0 and 1 represent ends of the spectrum with 0 representing perfect equality among citizens and 1 reflecting the extreme situation where all income is vested in one person.
11 African Development Indicators, World Bank.
12 *Sierra Leone Joint AFDB WB Assistance Strategy 2009-2012*, page 5.

Chronic malnutrition is serious with 35% of children between 6 and 59 months of age stunted and 10% severely stunted. Acute malnutrition reveals 8% of children are wasted and the phenomenon is more prevalent among girls than boys[13]. Food production and cash crop production had both collapsed. More significant however is the fact that approximately 40% of the population had become internally displaced, migrating into Freetown and three secondary towns, effectively reinforcing an urban-rural dichotomy in the economy. This has deprived the internally displaced of food security relatively more available to participants in agrarian economy and has also deprived the rural economy a supply of farm labor. So, whereas food production and the agrarian economy have begun to recover, the urban migration phenomenon which accelerated as a consequence of conflict has not been reversed. A number of districts identified as poor in terms of wealth are now relatively food secure but the same is not true for those dependent upon the market to supply their food. This explains why insecurity in the food supply—both in terms of prices and availability, continues to present a critical threat to the stability of Sierra Leone. WFP explains that:

***Households spend on average 63% of their total expenditure on food. Borrowing money to buy food is common (52%). Three quarters of the population rely on markets as their main source of food. With these conditions, the trend of high and rising food prices poses a serious threat to food security in Sierra Leone.***[14]

Rice is particularly important in this context. As the favored staple all across Sierra Leone, the country imports rice to supplement local production in order to meet the needs for domestic consumption. After the war, the prevalence of hunger and suffering led to a pledge by the President of the Republic on May 19, 2002 that "no Sierra Leonean should go to bed hungry". The position subsequently advanced by Government has been that Sierra Leone is a country with strong comparative advantage in rice production and that a food production strategy which emphasizes self-sufficiency in rice should become the paramount priority. Through this chain of logic, food security in Sierra Leone has become politically synonymous with the availability of rice. For this reason, the availability of rice at affordable prices is considered a vital ingredient for national stability, especially for the urban population no longer engaged in the agricultural economy. This has evolved to the point where both rice supply and rice prices are potential triggers for instability and government is highly attuned to rice as a barometer of well-being of the urban population.

### REGIONAL SECURITY

Sierra Leone is bordered by Guinea on the North and West, and Liberia on the East. The broader sub-region must be viewed as even larger, including Ivory Coast to the East of Liberia and Guinea Bissau to the West of Guinea. All of these countries have had stormy political histories and even Ivory Coast's long period of relative stability is now suffering a disruption. Liberia experienced their first civil war in 1989 and their second in 1999 and it was not until 2003 that stability began to return to this neighbor. Guinea has fluctuated between autocratic military and civilian rule, and only in December 2010 did the country return to civilian rule with Alpha Conde being declared the winner of democratic elections and bringing an end to two years of military rule. Guinea Bissau experienced a resurgence of political turmoil in 2010, and the recent post election conflict in Côte d'Ivoire has fueled a fresh exodus of refugees into the sub-region adding to the insecurity burden in the entire region. None of this sub-regional turmoil takes place in isolation. On the contrary, cross-border attacks or rebel recruitment between Sierra Leone, Liberia and Guinea have underlined that ***peace and conflict along the West African coastal fringe is a regional, not a national phenomenon***. Tensions in one country ripple across borders; these remain very porous and ethnic communities span territories not defined by nation-states. Displaced citizens often become refugees and regularly spill into each others' jurisdiction. Consequently, it must be concluded that conflict is contagious and Sierra Leone remains vulnerable to the regional security situation.

## PRIORITY MEASURES TO BOLSTER POLITICAL STABILITY

Promotion of stability starts with recognition of vulnerabilities. In that regard, Sierra Leone can be considered to have a high degree of awareness, not simply by those in government service, but by the population at large. Yet, assertive measures are needed to mitigate known risks and they must permeate the strategy, policy and action programs of government, partners and civil society. They must include measures to thwart both political and macroeconomic instability. The country's poverty reduction strategy gives explicit recognition to the risks arising from known determinants of conflict, so an important priority is to stay vigilant in monitoring the effectiveness of mitigation initiatives underway. At the same time, improvements in infrastructure and regional integration can bolster conditions for stability. With that in mind, government and partners are encouraged to consider the following recommendations.

- With respect to youth, the imperative is to go beyond training programs that invest young people with skills and create a supply of labor into the market. There is a simultaneous need to grow the economy in a manner that creates jobs and stimulates the demand for labor. Fundamentally, it is

13 *The State of Food Security and Nutrition in Sierra Leone*, World Food Program, February 2011
14 *Ibid*, WFP, February 2011

economic growth that will present Sierra Leone's unemployed youth with livelihood opportunities and a chance to contribute to nation building.[15] Enhanced investment in infrastructure can support this objective. In an important policy research paper examining the correlations between infrastructure, productivity and economic growth, a large macroeconomic data set pertaining to 136 countries over an extended period was examined to evaluate the impact of infrastructure investment on potential growth in Africa. Relevant conclusions are that growth is positively affected by the volume of infrastructure stock and the quality of infrastructure services and that if African countries were to catch up with the region's leader (Mauritius), their rate of economic growth would be enhanced by an average of 2.2 % per year.[16] While GOSL views private sector development as a critical driver of job creation within the economy, it is widely recognized that basic infrastructure is essential to stimulate productive private investment and this explains why the Poverty Reduction Strategy Paper places emphasis on investment in transport and power sector infrastructure. Interim measures are undoubtedly needed to expand youth engagement in productive informal activity and the Youth Commission is encouraged to identify development partners with experience in entrepreneurship and micro-enterprise models and to evaluate the potential of replicating youth employment models sponsored by private business in other countries in Africa.[17]

- Traffic in **illicit drugs** is a regional phenomenon due to the fact that the West African fringe is the shortest physical route by which to channel drugs from South America up to Europe. The long coastline traversing all MRU States and the islands off Guinea Bissau offer multiple attractive landing points from which to deliver supply to the continent and direct it northwards. As such, prevention and enforcement will be enhanced by TOCU and greater regional cooperation between States, both for terrestrial monitoring and to patrol their contiguous extended economic ocean zones (EEZ). Better communications infrastructure will help this situation by improving the telephone connectivity between States. Furthermore, infrastructure investment in cable internet will improve the conditions for establishing a region-wide virtual private network among the organs of government in West African States and the ECOWAS Commission. This Economic Community Wide Area Network (ECOWAN) will enable the security organs of governments in the region to share information and become more effective and unified in the common fight against the drug trade.

- The challenge on the **corruption** front is (1) to keep up the momentum so that the number of "continuing" cases shows constant progress towards closure or conviction and (2) public communication of outcomes is maintained. While Table 1.1 presented an encouraging picture with respect to "intake" of corruption cases under investigation, it is important that outcomes maintain pace. It is especially important that occasional high profile arrests or convictions not appear as window dressing to the public or to potential private investors in order to contribute to a bona fide change in perceptions regarding the investment climate. As GOSL paves the way for increased engagement of the private sector as investors in infrastructure, it is critically important that the country gain a reputation of being intolerant of corruption.

- With respect to **inequality** concerns, the nation's current policy emphasis which favors agricultural sector development remains appropriate given that this sector provides 60% of employment and offers the best opportunity to help incomes rise in the isolated and disadvantaged rural milieu. This will help to address the relatively greater poverty conditions prevailing outside Western Area. At the same time, future investments in infrastructure should be planned in a manner to deliberately address the extreme inequality in infrastructure supply and services prevailing between Western Area and the hinterland. For example, grid-based electricity is currently confined to Western Area alone with limited free-standing availability in the towns of Bo and Kenema. Hence, the majority of Sierra Leone's population is without a public supply of power. Accordingly, in order to improve national stability, it is important that infrastructure planning and future investment strive to redress the imbalance in national access to infrastructure services.

- With respect to **insecurity in food supplies**, this can be mitigated by expanded infrastructure stock, not only from further investment in transport infrastructure (trunk roads, feeder roads and river transport) but also by investments that enhance the conditions for cross-border trade. Sierra Leone recognizes that regional trade can result in higher farm-gate returns and household incomes in the agricultural economy, but also understands that informal trade flows and smuggling constitute a threat to stability. There is thus a need to encourage informal trade to evolve into formal trade flows sanctioned by authorities on both sides of borders. By investing in common border post facilities and improved market infrastructure to facilitate trade, Sierra Leone and

15 *"Beyond TRC: Governance in Sierra Leone,"* Ozonnia Ojielo, included in Rescuing a Fragile State: Sierra Leone 2002-2008, edited by Lansana Gberie, 2009, page 49.
16 *Infrastructure and Growth in Africa*, Policy Research Working Paper 4914, The World Bank, Cesar Calderon, April 2009, page 19.
17 An example would be the "Community Cleaning Services" company established to provide sanitation services in Nairobi slums by SC Johnson Company, as described in: http://www.vimeo.com/18954962

the neighboring states can expect market incentives to penetrate the rural milieu and stimulate expanded production.

- Regarding the intersection between national stability and **regional security**, Sierra Leone and its neighbors recognize that peace must take root across the entire sub-region in order to hold for each nation. There is more potential to achieve sub-regional stability now between Guinea, Sierra Leone and Liberia given Guinea's recent political evolution. This provides a basis from which to gradually shift the cooperation paradigm from one where "good fences make good neighbors" to "low fences make better neighbors". Specifically, now would be a promising time to shift from emphasis on national independence to sub-regional economic integration, including through trade and joint investment in infrastructure. This is best illustrated by examples. During the Sierra Leone conflict, Guinea was concerned that contagion would ignite internal conflict in their national territory. The Guinean armed forces therefore opted to reinforce the security of their national border by occupying a sliver of land in Sierra Leone on the border north of Koindu. This locale had long served as a vibrant sub-regional market for the trade of agricultural commodities between the neighboring countries (including goods from Mali and beyond), but cross border trade in this area has now atrophied. Coordinated infrastructure investment to revitalize the trade corridor, upgrading and connecting regional roads and the markets it once served would enable all MRU members to extract greater economic growth from trade and gain reciprocal benefit from the sub-region's return to peace and stability. The demilitarization of this border and collaboration of MRU states to revitalize hubs and spokes of intra-regional trade could send a powerful message that the countries are back "open for business." Likewise, collaboration between MRU states to establish a cross-regional power transmission line would enable the countries to trade power between each other and into the West African grid. This would improve each country's security of power supply and give them the option of importing or exporting into the West African energy market in years to come. Concurrently, downstream financial economies could be derived from this type of regional-scale investment. On the one hand, participating countries will be able to choose a least cost supply option, obtaining a constant alternative between domestically generated supplies of electricity versus power imports. The scale of transmission line investment will also economize on the unit cost of transmission into national grids. It will likewise make it less costly for Sierra Leone to use the regional transmission back-bone to begin building a domestic electricity distribution grid which can further penetrate the rural milieu.

## VULNERABILITY TO FISCAL WEAKNESS AND THE IMPORTANCE OF MACROECONOMIC STABILITY

Sierra Leone's continued stability also depends upon the nation regaining control over its macroeconomic balance and fiscal independence. In this instance, the nation's vulnerability is not towards determinants of conflict, but towards sub-optimal development choices that arise due to a lack of fiscal space. Presently, Sierra Leone is highly dependent on external financing and the declared intention to wean the nation off of donor budget support scheduled to begin after national elections in 2012 may appear as a looming threat. This has the (likely unintended) effect of reducing GOSL room to maneuver. In such circumstances, GOSL could plausibly be attracted by development alternatives that bear greater risk than would otherwise be the case. As examples, embraced risks could range from prioritizing FDI flows without adequate regard for ethical reputation or business standard of their source, bartering indeterminate mineral wealth in exchange for present-day infrastructure or to choosing impatient or enclave growth paths which are less inclusive and beneficial to the population than could otherwise be the case. All of these risk-reward scenarios are presently being contemplated by GOSL or are beginning to materialize. The intention of this section is therefore to sensitize the GOSL to the greater pool of capital investment available through participation in regional infrastructure projects. It also aims to sensitize Sierra Leone's development partners to the nation's continued vulnerability on the macroeconomic front and to encourage deeper reflection about the time-frame for post-conflict disengagement.

For the past decade Sierra Leone has been highly dependent upon foreign aid and external financing via direct budget support, debt relief, external grants and loans in order to meet government expenditure. This was as high as 41% of GDP in 2001, but that level of engagement was absolutely essential to enable the country to move beyond conflict and revitalize the functions of government. In subsequent years the nation has made steady progress in the realm of public financial management, both in reducing the budget as a % of GDP and at increasing the rate and share of revenue mobilization. Domestic revenue collection has multiplied five-fold in nominal terms from a base of Le 200 billion in 2001 to Le 1,006 billion in 2010. In 2010, the government budget stood at a total of 22.5% of GDP, of which domestically-raised resources contributed 51.7%, or 11.7% of GDP. The medium term revenue outlook is promising given better mobilization from a goods and services tax, the fact that royalties and revenues from the mining sector are expected to rise and government expenditures on petroleum are being constrained.

Yet, recurrent and capital expenditures have both risen by substantial amounts over the past decade and government has had to rely on deficit financing to make ends meet. Recurrent expenditure has risen to keep pace with a rising wage

bill and this has been unavoidable to permit expanded delivery of health, education and security services to the nation. Capital expenditures have also increased and will continue to rise in order to maintain progress against the development priorities and infrastructure investment objectives set out in the Agenda for Change, Sierra Leone's poverty reduction plan. Consequently, Sierra Leone is currently benefiting from a three-year Extended Credit Facility from the International Monetary Fund and the Fund is helping Government to keep close watch on macroeconomic stability.[18] Though Sierra Leone is presently enjoying macroeconomic stability, fiscal self-sufficiency is a long way off and the financing gaps to implement Government's poverty reduction strategy are significant. The focus of the current IMF ECF-supported program is therefore to create fiscal space for GOSL spending priorities. While the IMF's conclusion is that a **sustainable fiscal policy** is critical for macroeconomic stability, this report also questions the wisdom of an abrupt withdrawal of budget support.

GOSL's priority projects for roads, energy, water, communications and sanitation systems across the country will require a more than 10-fold increase in public infrastructure investment in the period 2011–13 as compared to 2008–10. This report will stimulate further reflection on how infrastructure investment might best be prioritized in order to yield inclusive growth at accelerated rates from promising sectors. At current commitment levels, only about 25% of the increase is to be financed from the projected medium term budget and partner resources. While a significant increase in commitments of concessional project financing is expected and desired from donors and partners, substantial residual financing for the coming three years will nonetheless be required. The gap will need to be closed by further raising domestic resources or by identifying additional sources of external financing. Some alternatives for the latter are attractive while others are cause for concern. A worrisome option would be to reduce the pace and scale of infrastructure investment. This should be avoided if at all possible since investment is vital to accelerating Sierra Leone's economic growth rate, particularly given the depleted state of the nation's infrastructure as explored in section 4 of this chapter. A more attractive alternative is to create favorable conditions for private sector participation (PSP) in infrastructure through public-private partnerships (PPPs) and this theme will be explored throughout the present report. A variant thereof includes riskier partnership scenarios identified earlier, including recourse to barter types of mineral concession-infrastructure deals with foreign companies or governments. GOSL would naturally find such deals appealing against the choice of foregoing infrastructure investment altogether. A fourth, more promising scenario for consideration by GOSL would involve expanded participation in regional infrastructure projects. Financing for regional projects is relatively more available on concessional terms with better leverage above that allocated on a purely national allotment basis and this is true for MDB sources as well as large multilateral organizations such as the EU. Government is therefore encouraged to consider how participation in regional projects may indeed help it to meet national development priorities and investment objectives.

Concurrently, development partners are encouraged to reflect on their current time-table for fiscal disengagement following from the next elections. The previous section makes clear that the nation remains vulnerable to various determinants of conflict and this section reinforces how Sierra Leone remains challenged by its current macroeconomic condition. In his article entitled "Orphan of the Storm: Sierra Leone and 30 Years of Foreign Aid," Ian Smillie identifies the reluctant hesitation of the international community to reckon with Sierra Leone's "complex emergency" in the 1990s[19]. However, when it later became essential to engage in earnest, the UN troop strength (including the British) was taken up to 17,000 uniformed personnel to defeat the RUF at a cost of $2.6 billion. Even though current budget support for the capital and recurrent accounts are approximately $120 million per year, this pales in comparison to the cost of acquiring peace and the fiscal space to continue pursuit of a balanced and promising growth path seems a modest price to pay.

## KEY FINDINGS AND CONCLUSIONS REGARDING FRAGILITY AND STABILITY IN SIERRA LEONE

The foregoing analysis has identified the contributing causes of Sierra Leone's decade of conflict, notably poverty, poor governance, exclusion and inequality, along with the country's continued vulnerability towards factors with potential to impact political stability. It has also identified the nation's fiscal weakness and the critical importance of macroeconomic stability. The resulting vulnerability has naturally caused Sierra Leone, as a recovering nation-state, to focus internally over the past decade. The focus has been on poverty reduction and economic recovery, job creation for youth, expanded food security and better national integration through improved allocation of infrastructure services outside the Western Area. This emphasis on stability with an inward orientation is defensible and is well understood. It has naturally led to infrastructure development plans that prioritize internal unity as an over-riding objective. At the same time, the country can take heart in what it has achieved and begin to look outwards.

18 Staff Report for the 2010 Article IV Consultation, First Review of the Three-Year Extended Credit Facility, International Monetary Fund, November 2010

19 Ian Smillie, Chapter 1 of Rescuing a Fragile State: Sierra Leone 2002-2008, an anthology of papers presented at Wilfrid Laurier University in Nov. 2007 and edited by Lansana Gberie, LCMSDS Press, 2009.

The analysis further identifies that enhanced investment in infrastructure plus an orientation towards integration can help to diminish fragility by accelerating economic growth and by improving the efficiency of regional efforts to mitigate threats. Participation in regional projects can leverage greater flows of affordable financing for capital investment and GOSL is encouraged to consider how this avenue might respond to national priorities. Contributions that improved infrastructure can make to reducing vulnerability are summarized in Table 1.3.

For instance, regional communications networks can boost Sierra Leone's and the region's effectiveness in fighting crime, corruption, money laundering and the illegal trade in drugs. Regional integration and the expansion of markets through trade can help to enhance food security by stimulating supply and enabling producers to better respond to demand. Regional investment in infrastructure can further advance this process by delivering lower cost solutions to utility service delivery than would otherwise be available through investment scaled to national level alone. The next section turns to an examination of Sierra Leone's socio-economic profile as it stands today.

**Table 1.3: Improvements in Infrastructure Can Help to Reduce Exposure to Threats**

| | Infrastructure | | |
|---|---|---|---|
| | **Improved Power Supply** | **Improved Communications** | **Improved Transport Networks** |
| **Reduce Threats** | | | |
| **Employment for Youth** | Indirect job creation | BPO= direct job creation; indirect job creation from ICT-enabled growth | Promising: construction & transport services |
| **Thwart illicit activity** | - | Via ECOWAN VPN & emergency comm. system | Improve access of Security apparatus |
| **Reduce Inequality** | If extend national grid | W/ terrestrial backbone | Core Road Network joins interior w/ capital |
| **Tackle Corruption** | - | Enables e-government and better transparency | - |
| **Improve Food Security** | Agro-processing / refrigeration preserves output; reduces post harvest losses | Transmit better information to enable markets to become more efficient | Feeder roads connect producers to markets |

# 2. Socio-Economic Situation Today

This section profiles the socio-economic situation of Sierra Leone today. It begins in the context of political geography, looking at the country's position in West Africa and the political map that delineates the internal administrative landscape. It presents an appraisal of Sierra Leone's condition after its decade of conflict in terms of life expectancy, poverty incidence, literacy levels and its ranking against the global Human Development Index. It reviews the country's recent macroeconomic performance and challenges and the trend of economic growth and recovery which has prevailed since 2002. The report then turns to an examination in greater depth of the contribution from productive sectors to the economy to establish the absolute and relative contributions by sector to current economic performance. It reviews the contributions of key sectors to GDP, employment, growth and national stability. In each case, obstacles and impediments preventing higher level performance are identified. These profiles are established to aid in later identification of sectors with greater relative potential to reduce poverty, generate stability and enhance economic growth. Those which stand out will be examined in greater depth in Chapter Two of the report to examine how infrastructure investment and regional integration applied to promising growth areas can accelerate the country's recovery.

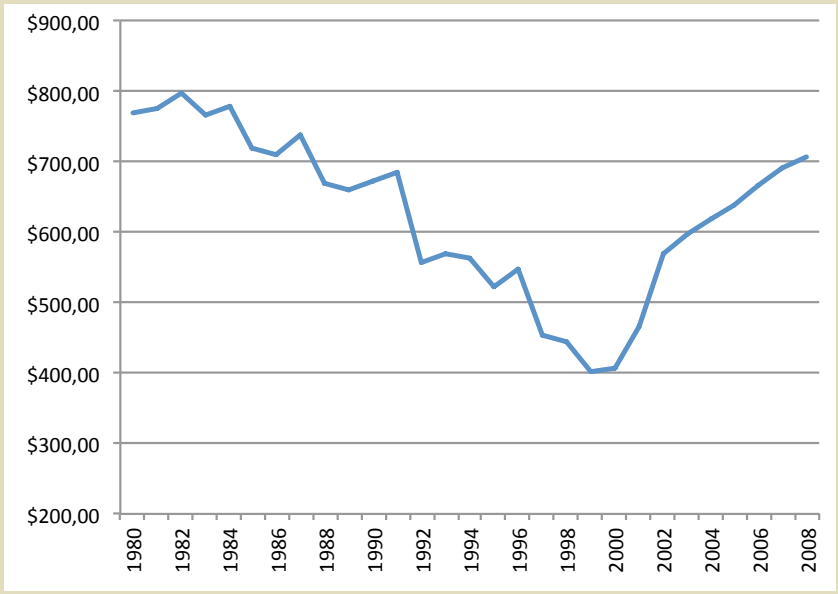
## POLITICAL, SOCIAL AND ECONOMIC PROFILE OF PRESENT-DAY SIERRA LEONE

Sierra Leone is a relatively small country, geographically situated on the Southern Coastal fringe of West Africa, located next to Liberia in the East and surrounded by Guinea along its Western and Northern borders. Sierra Leone, Guinea and Liberia share many peoples of common ethnic origin but the territory was divided by political borders during the colonial era. Sierra Leone and Guinea were colonized by Great Britain and France respectively, while Liberia was governed by slaves freed in the US who were returned to the African continent. Both by location, and by choice, Sierra Leone is a member of the ECOWAS Regional Economic Community. The administrative map of Sierra Leone is presented in Figure 1 on page 9. This reveals that the country is divided into three provinces, Northern, Southern and Eastern plus the relatively small Western "Area" which includes the capital city, Freetown. The diminutive size of Western Area relative to the three provinces serves to emphasize how perceptions of inequality and unfair access to a greater share of the nation's wealth were able to breed resentment by the population up country. Each province is divided into districts (12 in total) and each district is subdivided into chiefdoms (150 in total). The combination of district and chiefdom levels of governance strives to be inclusive of both traditional and modern forms of democratic leadership. Freetown is a city with 800,000 inhabitants and the total population of Sierra Leone is currently estimated at 5.75 million.

During Sierra Leone's decade of conflict, the nation's infrastructure, industrial mining and agro-industrial manufacturing base were largely destroyed. By 1995 only 80 of 500 health centers were functioning, most of them in and around Freetown and 70% of the country's schools had been destroyed in the conflict. The UN estimate in 1996 was that 330,000 Sierra Leonean refugees had crossed in Guinea and Liberia. Agricultural production plummeted and official exports shut down. Sierra Leone's performance during the war deepened the previous pattern of economic decline.

Emerging from conflict, Sierra Leone realized 27% real economic growth in 2002, 9% in 2003 and a bit over 7% from 2004 to 2007. While encouraging, these recovery growth rates must be understood in the context that percentage gains are easier to achieve when a base is extremely low. Placing this in historical perspective, Figure1.1 identifies that on a per capita basis, constant $ GDP in 2008 was still recovering and remained 8.2% below the level it had reached in 1982. This represents three decades of missed opportunity to advance. In fact, Sierra Leone remains one of the poorest countries in the world and it continues to face enormous challenges. UNDP ranked Sierra Leone at the bottom of the Human Development Index in 2007 and though it improved to a ranking of 158 in 2010, it remains in the bottom 10%. Life expectancy at birth is 48.2 years and infant mortality is 160 per 1,000 live births. The total literacy rate is estimated at 34.8 % and vast gender and regional disparities in school attendance is only now beginning to abate. Although primary school enrolments have more than tripled since 2004, girls' enrolment and pass rates still lag behind those of boys. Poverty remains staggering and is heavily concentrated in rural areas and the urban fringe surrounding Freetown, with poverty prevalence rates of approximately 78% in rural areas and 27% in urban areas.[20] Table 1.4 presents additional data which situates Sierra Leone's socio-economic status in comparison to its closest regional neighbors and other benchmark ECOWAS states.

**Figure 1.1: GDP per Capita, Constant (2000) $**




What these data starkly reflect is not only the impoverished status of Sierra Leone, but the fact that it is geographically situated within a troubled neighborhood. Ivory Coast, also an MRU member state, has less than four times the Sierra Leone population, but eleven times their GDP, and this even after a period of turmoil. It must be recognized, therefore, that Sierra Leone and its sub-regional neighbors have all lost substantial ground relative to other ECOWAS states that have avoided or mitigated conflict. Consequently, as other states such as Ghana have begun to shift their comparative advantage into competitive advantage, and are approaching the point of economic "take-off", Sierra Leone, Guinea Bissau and Liberia are starting over, Guinea is striving to catch up and, collectively, the Southwestern coastal fringe countries are way behind.

The context of regional fragility is therefore an important consideration when evaluating the merits of regional versus national scenarios for investment in infrastructure. When a conflict-prone state resides next to a stable state, the attraction of cross-border infrastructure investment is inherently more compelling if the stable state sees the benefits of collaboration and is willing to sponsor investment therein. The examples of South African investment in Mozambique's aluminum industry and the Maputo-Durban trade corridor bear testimony to the benefits which can arise. One of the poorest countries in the world at independence, Mozambique has emerged from decades of conflict to become one of Africa's best-performing economies thanks in part to its favorable neighborhood. Sierra Leone does not have this advantage. Situated as it is within a fragile geographic fringe, the stakes are different. Yet, collective action is needed to maintain stability and to change the investment climate in the entire sub-region. Coherence in national policies is hard enough; collective sub-regional coherence is downright difficult. Yet, it is essential that the States located on the Southwestern coastal fringe develop a conviction for achieving future prosperity

20 *Sierra Leone Joint AFDB WB Assistance Strategy 2009-2012*, page 5.

### Table 1.4: Socio-Economic and Demographic Data for Sierra Leone

| Socio-Economic Data | | Fragile Fringe Countries | | | | Comparisons & Benchmarks | | |
|---|---|---|---|---|---|---|---|---|
| **2009, unless specified** | 1 | **Sierra Leone** | **Guinea** | **Liberia** | **Guinea-Bissau** | **Ivory Coast** | **Nigeria** | **Africa** |
| Population | 2 | 5,696 | 10,069 | 3,955 | 1,611 | 21,075 | 154,729 | 1,008,354 |
| % Female Pop | | 51.3% | 49.5% | 50.3% | 50.5% | 49.1% | 49.9% | 50.1% |
| Economically Active | % | 37.7% | 48.0% | 36.8% | 37.2% | 37.3% | 30.9% | 39.3% |
| % of which Female | | 51.1% | 47.1% | 40.2% | 38.2% | 30.4% | 36.5% | 41.2% |
| HDI Rank out of 177 | 2007 | 177 | 160 | Not ranked | 175 | 166 | 158 | Ghana = 135 |
| HDI Rank out of 169 | 2010 | 158 | 156 | 162 | 164 | 149 | 142 | Ghana = 130 |
| Infant mortality per 1000 | 2007 | 155 | 93 | 93 | 118 | 89 | 97 | 82 |
| Life Expectancy, Female | 2008 | 48.99 | 60.13 | 59.85 | 49.61 | 59.09 | 47.33 | 55.98 |
| Life Expectancy, Male | 2008 | 46.42 | 56.09 | 57.19 | 46.50 | 56.01 | 46.36 | 53.71 |
| Poverty % below Nat'l Line | 2003 | 65.9% | N/A | 63.8% | 65.7% | N/A | 54.7% | N/A |
| Adult Illiteracy, 2007 | % | 73.2% | N/A | 49.1% | 45.6% | N/A | 35.9% | N/A |
| Literacy rate, females 15-24 | 2007 | 43.9% | | | | | | |
| Literacy rate, males 15-24 | | 64.4% | | | | | | |
| GDP Million, Current US $ | 2008 | 2,156 | 3,799 | 830 | 843 | 24,055 | 214,473 | 1,517,834 |
| GDP Growth Rate | 4 | 4.3% | 4.7% | 7.1% | 3.2% | 2.5% | 6.0% | |
| GDP Per Capita US $ | 2008 | 388 | 385 | 346 | 535 | 1,168 | 1,418 | 1,446 |

Source: African Statistical Yearbook 2010. Literacy statistics from African Development Indicators.
Mid year data, Thousands

which can differ dramatically from the past. Mutual and collective interests can be safely explored via the States' membership in the Mano River Union (MRU) though this organization excludes Guinea Bissau and includes Ivory Coast. Further discussion of how membership in ECOWAS and the MRU can benefit Sierra Leone and neighboring fringe countries is resumed in the final section of chapter one. The report resumes the theme of regional integration in the discussion of future growth scenarios in chapter 2 when it examines the prospects for enhanced growth. It continues to apply this lens when it develops national and regional infrastructure action plans in chapter 3.

## MACROECONOMIC PERFORMANCE

Sierra Leone's economic growth surged after the war with an annual average growth of 7.3% from 2003 to 2008, but weakened to 4% in 2009, reflecting the impact of the global economic crisis. Recovery was supported by the reactivation of agriculture and trade sectors with contributions from the social and services sectors on a smaller scale as is demonstrated in Figure 1.2.

As noted in the discussion of fragility, Sierra Leone has viewed the priority of maintaining a stable macroeconomic environment as a critical component for national stability. In December 2006, Sierra Leone reached the Completion Point under the Enhanced Heavily Indebted Poor Countries (HIPC) initiative and gained critical relief under the Multilateral Debt Relief Initiative. Altogether, this relief will amount to about $1.6 billion over the next thirty years.[21] Not unusual for fast growing post-conflict economies, inflationary pressures have increased and by 2004 inflation had reached an annual average high of 14.2 %. The government has tried adopting policies to reduce inflation, but external shocks affecting the prices of food and fuel have kept inflation above double digits to a level around 15% in 2011. GOSL has also tried to maintain stable fuel prices at the consumer level through a subsidy policy but this is now being repealed under IMF guidance. The nominal effective exchange rate depreciated enough in 2006 -2009 to offset the rise in inflation, keeping the real exchange rate stable despite the deterioration of terms of trade. In the final quarter of 2009 the exchange rate of the Leone depreciated severely against international currencies, fueling a return to double digit inflation. The 2010 CPIA review indicated that, despite difficult challenges, implementation of fiscal and monetary policies facilitated a successful sixth review under the ECF in June 2010 and concluded that prudent policy had prevented a deterioration of the macroeconomic situation following the global financial crises and the outlook is good[22].

In recent years Sierra Leone has worked diligently to implement a Revenue Authority modernization plan under which a Goods and Services tax (GST) was introduced in 2010 to combine and replace several distinct categories of taxation. Early indications are that this has broadened the tax base

21 *AFDB/IDA/IFC Joint Assistance Strategy 2009-2012*, Page 3.
22 2010 CPIA Rating: Country Worksheet Write-Up for Sierra Leone, African Development Bank.

and will improve the government's ability to raise domestic revenue on a sustained basis. Previously, GOSL placed heavy dependence on customs-based revenues (on imports more than exports), to the extent that customs duties comprised almost 50 % of government revenues. With the introduction of the revised GST measures, the government's revenue mobilization has improved. Domestic resource mobilization increased by 34% in 2010 over 2009 and the share of customs and excise revenues therein reduced to one-third of the total. Remittance inflows are quite high (estimated at 11% of GDP) but they dipped due to the global financial crisis leaving the country vulnerable to the vagaries of this source of capital formation.

Nonetheless, chronic fiscal deficits, due to essential post-conflict spending on rehabilitation, security and social programs continue to impair government capacity to invest in development and infrastructure. Consequently, Sierra Leone has relied on grants and aid, averaging 30 to 40% of government budgetary resources from 2000 to 2009. From a governance perspective, however, GOSL's priority is to resume the provision of critical social services to the population, including health, education and security. This has raised the wage bill and also non-wage recurrent expenditure. The Country Policy Institutional Assessment ratings conducted by Bretton Woods institutions indicate that provision of public goods has improved and Government plans to stick to this trend which is of special importance for a fragile state. Recently, the Government launched a new free health care initiative (FHCI) for children and pregnant women. With steady growth rates since the end of the civil war, government has recognized investments in infrastructure as a key objective required to keep the economy on the current positive trajectory. In 2008, the main focus was on the energy sector but with Bumbuna I generation plant now completed, the focus has turned to enhancing the construction of roads and upgrading the capability of the Ministry of Works.

Compared to less fragile ECOWAS states, Sierra Leone is an aid "orphan." Though the country receives high relative levels of official development assistance (ODA) on a per capita basis, total flows are lower relative to states deemed to be higher performing. For example, Sierra Leone has received an average of $377 million in current ODA dollars annually from 2001 to present whereas Ghana, an aid "darling", has received well over one billion US$ in ODA annually since 2004. Many bilateral aid agencies began rationing assistance in the new millennium to states deemed to be "governing justly" and this has placed a high performance hurdle for "failed" and "fragile" states to compensate for past weakness. Government has strong intentions to encourage foreign direct investment, and while this has begun to improve, it is immaterial as compared to ODA. Financial flows into this fringe are identified in Table 1.5.

Monetary policy has reflected fiscal performance with increases in bank credit to Government contributing to a rapid increase in broad money. Also, interest rates and lending rates have been affected with commercial bank lending fluctuating between 24 to 30 % since 2005, Treasury bills paying around 18 % and crowding out credit flows to factor and product markets. Table 1.6 summarizes recent indicators of macroeconomic performance.

Overall, the data reveals that Sierra Leone has made significant progress at improving macroeconomic governance during its recent decade of stability but it still has much distance to cover. The balance of payments gap has been reduced as exports have begun to recover, but the imports bill is substantial and rising in absolute terms. The stock of debt declined due to the HIPC forgiveness program, but the country continues to have limited ability to expand external borrowings and must therefore be highly strategic and cautious about capital allocation. The economy achieved substantial real growth rates in the early years but this began to tail off as the economic base recovered and earlier output levels began to be restored.

In order to reach Millennium Development Goal # 1 of reducing poverty (measured at the threshold of US$1.00 per day) to 42 % by 2015, real economic growth will have to get a 'second wind' and accelerate above 7 % on a sustained basis. These observations argue favorably for a growth strategy that, among other priorities, seeks to extract maximum value out of productive infrastructure investment. It is especially important to pursue investment which can increase the quality and lower the cost of infrastructure services. This outcome can be achieved through economies of scale in the sizing of infrastructure projects and via financing on favorable terms. Regional infrastructure projects can sometimes deliver greater cost savings and efficiencies than are possible through projects scaled at a national level and, as such, should generally be evaluated and compared to alternative national infrastructure projects. In this light, it is also worth mentioning that private sector participation (PSP) through FDI in infrastructure is to be encouraged because it will generally accelerate the time-frame on which such investment can be realized. However, it is vitally important that the financing costs of PSP in infrastructure be taken into consideration so that value for money and the alternative public sector cost can be compared to the benefits of PSP.

The World Bank and African Development Bank apply a Country Policy and Institutional Assessment (CPIA) rating to all countries they engage with which establishes ratings against a set of 16 criteria grouped in four clusters: (a) economic management; (b) structural policies; (c) policies for social inclusion and equity; and (d) public sector management and institutions. Maximum possible score is 6 and Sierra Leone was rated at 2.5 in 2005 but, as a result of progress in overall governance, achieved a score of 3.83 for economic management in 2010.

The following section turns to an examination of Sierra Leone's productive economy to establish the absolute and relative contributions

of major sub-sectors to economic performance. It reviews performance in terms of the contribution of each to GDP, employment, growth and national stability. Obstacles and impediments preventing higher level performance are identified. These profiles aid in identifying sectors with greater relative potential to reduce poverty and generate stability-enhancing growth.

## SECTOR CONTRIBUTIONS TO ECONOMIC PERFORMANCE AND NATIONAL STABILITY

Before the civil war, Sierra Leone had more breadth and diversity in its economy than is the case prevailing today. Previously, Sierra Leone was an established tourism destination, frequented by visitors from Europe who were attracted to the country's pristine beaches. This is one segment of the economy which has suffered contraction, both because tourism infrastructure was largely destroyed but also because the country has suffered from the deterioration of its "brand" due to adverse publicity from "blood diamond" conflict. A second area of severe contraction has been industry, whereby many of the agro-industrial processing plants (such as juice-canning and oil palm processing) were destroyed and have yet to be resurrected.

Not only has this caused a decline in exports from this sector, but it has eliminated a major source of formal sector jobs since these large employers have been put out of business. Figure 1.2 presents the contribution in percentage terms of each economic sector to the economy over the past decade. This is followed by Table 1.7 which depicts real GDP rates of growth measured as % change achieved by sector and sub-sector year on year for the past five years. Subsequent paragraphs refer back to these two data sets when discussing the economic performance of productive sectors.

## THE CONTRIBUTION OF AGRICULTURE

Sierra Leone has a strong comparative advantage in agriculture due to its abundant rainfall (3,500 to 4,000 mm annual rainfall in a six month rainy season), a varied ecosystem comprising five different landscapes (forests, savanna woodlands, freshwater, wetlands, and marine resources) and an estimated 5.36 million hectares (ha) of arable land as summarized in Table 1.8.[23] Of the economy's total aggregate growth which has occurred since 2001, a main driver has been the agricultural sector which initially posted huge gains post conflict and has now stabilized at about 50% of GDP.

### Table 1.5: Financial Flows into Sierra Leone and Comparison States

| Socio-Economic Data | | Fragile Fringe Countries | | | | Comparisons & Benchmarks | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | Sierra Leone | Guinea | Liberia | Guinea-Bissau | Ivory Coast | Nigeria | Africa |
| ODA per capita, US $ | 2001 | 76.7 | 32.8 | 13 | 44.7 | 10.5 | 1.4 | 19 |
| ODA per capita, US $ | 2008 | 66.0 | 32.4 | 329.6 | 83.5 | 29.9 | 8.5 | 41.0 |
| ODA Current $, Total | 2008 | 366,820,000 | 318,980,000 | 1,250,360,000 | 131,620,000 | 616,510,000 | 1,289,780,000 | |
| FDI, net Current US$ | 2 | 94,467,523 | 385,900,000 | 131,637,709 | N/A | 426,902,108 | 5,618,727,039 | |
| FDI per capita | 2001 | 2.3 | 0.2 | 2.8 | 0.3 | 15.4 | 10.0 | 23.9 |
| FDI per capita | 2008 | 5.3 | 137.2 | 37.9 | 9.5 | 17.1 | 134.1 | 88.9 |
| Remittances, current $ | 2 | 132,650,191.0 | 34,380,000.0 | N/A | N/A | | 26,459,979.0 | |

Source: African Statistical Yearbook 2010.
African Development Indicators, World Bank. FDI data = 2007. Workers' Remittances, payments Current US $. 2007 data.

### Table 1.6: Selected Indicators of Macroeconomic Performance

| Indicators | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|
| Real GDP Growth, % | 18,2 | 18,8 | 21,6 | 9,6 | 7,5 | 7,4 | 6,4 | 4,8 | 5 |
| Nominal GDP Market Prices (US $ Mil) | 806,05 | 1317,1 | 1433,6 | 1430,1 | 1486,8 | 1629,7 | 1939,1 | 1968,9 | 2161,9 |
| Inflation, Average Annual % | 3,4 | -3,7 | 8,2 | 14,2 | 12,1 | 9,5 | 11,7 | 12,8 | 9,2 |
| Money Supply (M2 Growth in %) | 33,7 | 29,6 | 21,8 | 20 | 31,2 | 21,5 | 22,8 | 22,4 | 27,6 |
| Domestic Revenue as % of GDP | 13 | 8,6 | 8,6 | 9,3 | 9,7 | 10,2 | 9,2 | 11,4 | 11,1 |
| Fiscal Deficit incl grants (% of GDP) | -10,6 | -5,9 | -1,4 | -1,9 | -1,4 | -1,6 | -0,8 | -3,4 | -3 |
| Imports (% of GDP) | -20,7 | -19,3 | -21,9 | -18,1 | -24,5 | -21,6 | -20,7 | -23,3 | -27,6 |
| Exports (% of GDP) | 3,9 | 4,6 | 7,7 | 10,8 | 12,4 | 15,4 | 14,5 | 16 | 15 |
| Gross Reserves (months of imports) | 2,4 | 2,7 | 1,7 | 3,8 | 4 | 4,2 | 5,3 | 4,3 | 6,2 |
| Stock of External Debt Outstanding($ mil) | 1427,6 | 1536 | 1662,2 | 1710,2 | 1689,6 | 1610,9 | 536,7 | 620,2 | 680 |

Source: Sierra Leone Authorities and West African Monetary Institute staff estimates

23 Table content provided courtesy of Sierra Leone Investment and Export Promotion Agency.

As such, the sector represents the biggest current driver of national economic growth and approximately two-thirds of the population derives its livelihood from this sector. Agriculture is the sector most able to tackle the twin priorities of increasing food security and income generation on a broad scale. As such, the performance of the agriculture sector is critical to the stability and welfare of the nation. Agriculture comprises four main sub-sectors, including crops, livestock, fisheries and forestry. The contribution of respective agriculture sub-sectors to growth and employment is presented in Table 1.9. What is clear is that the crops sector predominates as a source of employment in the country, dwarfing that which is generated by fisheries and other sub-sectors. As other segments of the economy have begun to revive and create jobs, the share of employment by the crops sector has declined, but it still generates six out of ten livelihoods within the economy.

At the same time, agriculture is not yet performing up to its full potential and further gains will require intensification and diversification of production, requiring a package of complementary investments tailored to the requirements of each sub-sector. These are explored further below and the greater potential of the crops sector is examined in detail in chapter 2.

## FOOD CROP PRODUCTION

Sierra Leone has the capacity to grow a wide variety of crops under rain-fed conditions, including rice, maize, sorghum, millet, cassava, sweet potatoes, yams, groundnuts, bananas, plantains and cashews. Output has recovered in all major crops since the conflict except for groundnuts as identified in Table 1.10.

Presently, rice and cassava are the main staple crops and outputs have more than doubled in the past seven years. Cassava and other tubers are presently produced at levels far exceeding domestic demand for fresh consumption and while a good deal of production is exported, an estimated 40% of production is lost due to lack of adequate post-harvest storage. General constraints obstructing higher levels of crop production across all crop varieties include declining soil fertility, insufficient or erratic delivery of input supply, use of unimproved seed varieties, lack of rural finance, insufficient processing equipment and poorly developed value chains connecting producers with markets. With respect to infrastructure, a shortage of post-harvest storage infrastructure, crop drying and sorting facilities plus rain-protected market installations present further impediments to the sector. In addition, the state and density of rural feeder roads is a major constraint, as is the lack of all-weather roads to link production zones with consumption centers preventing farmers from effectively marketing their production surplus.

The case of rice bears particular scrutiny. Rice output remains below

**Figure 1.2: Percentage Contribution of Productive Sectors to Sierra Leone Economy**

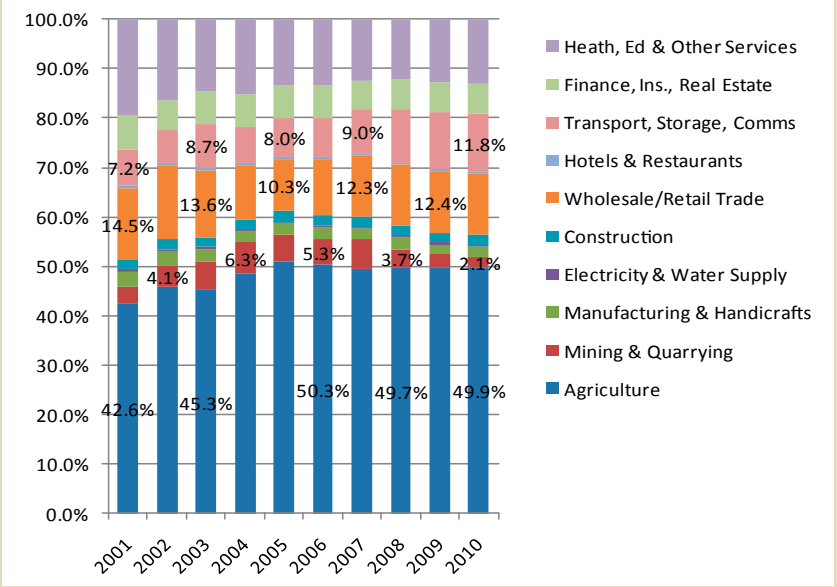



**Table 1.7: Year on Year Percentage Growth Rate by Sector**

| | 2006 | 2007 | 2008 | 2009* | 2010** |
|---|---|---|---|---|---|
| **Total cases investigated** | **4,9** | **4,08** | **4,48** | **3,99** | **4,12** |
| Crops | 7,41 | 4,31 | 5,77 | 5,22 | 5,3 |
| Livestock | -2,55 | 6,45 | 1,18 | 1,27 | 1,6 |
| Forestry | 3,26 | 1,8 | 2,89 | 1,38 | 1,2 |
| Fishery | -0,49 | 3,44 | 1,45 | 1,25 | 1,5 |
| **Industry** | **3,3** | **11,69** | **-17,57** | **-13,32** | **-5,2** |
| Mining & Quarrying | 0,29 | 19,9 | -35,7 | -25,17 | -17,4 |
| Manufacturing & Handicrafts | 12,74 | 2,05 | 1,21 | -6,89 | 1 |
| Electricity & Water Supply | -3,1 | -5,56 | 114,88 | 5,14 | 10,2 |
| Construction | 1,95 | 4,01 | 2,42 | -2,57 | 2,1 |
| **Services** | **9,28** | **6,49** | **10,34** | **7,95** | **6,48** |
| Wholesale & Retail trade | 15,18 | 16,56 | 4,65 | 3,9 | 4,1 |
| Hotels & Restaurants | -6,66 | 2,76 | -2,44 | -1 | 1 |
| Transport, Storage & Communication | 6,98 | 18,52 | 25,95 | 10,9 | 5,2 |
| Finance, Insurance & Real Estate | 5,12 | -7,52 | 8,53 | 5,2 | 4,3 |
| Administration of Public Services | 20,38 | -10,22 | -16 | -1,3 | 1 |
| Other Services | 3,58 | 2,21 | 3,75 | 3,1 | 4,3 |
| Education | 15,59 | 24,73 | 20,6 | 20,1 | 17,3 |
| Health | 1,56 | -15,6 | 22,04 | 19,6 | 15,6 |
| Non Profit Institutions | -10,65 | -7,35 | 9,48 | 5,1 | 5,1 |

Source: Statistics Sierra Leone. *2009 Data is Provisional, ** 2010 Data is Projected

national consumption requirements thus Sierra Leone regularly imports rice from Asia to make up the balance. As was identified however, rice constitutes a highly sensitive staple in Sierra Leone whereby sufficient availability at affordable prices remains a barometer of public satisfaction and a key contributor to stability. For this reason, Sierra Leone is seriously striving to become self-sufficient in rice production and it monitors both current output and progress towards its production goal as is portrayed in Table 1.11. At the same time, Sierra Leone's rice is highly prized by consumers in neighboring countries but GOSL periodically prohibits cross-border exports in order to maintain national supply and preserve conditions for stability. Agronomists believe that Sierra Leone has a comparative advantage in rice production and can eventually become a major supplier of neighboring countries within ECOWAS.

### Table 1.8: Agricultural Endowment

| | |
|---|---|
| **Land Area** | 72,000 km$^2$<br>Uplands: 60,650km$^2$ (83.9% of total area)<br>Lowlands: 11,650km$^2$ (16.1% of total area) |
| **Arable Land Area** | 5,362,000 Ha (74.2% of total area)<br>Uplands: 4,302,000 Ha (59.5% of total area)<br>Lowlands: 1,165,000 Ha (16.1% of total area) |
| **Lowland Arable Area Composition** | Inland Value Swamp: 690,000 Ha<br>Bolis: 145,000 Ha<br>Riverain Grassland: 130,000 Ha<br>Mangrove: 200,000 Ha |
| **Crops (2/3 of agriculture GDP)** | Rice, Cassava, Vegetables, Citrus fruits, Cocoa beans, Coffee, Oil Palm, Ginger and Cashew |
| **Livestock (1/3 of agriculture GDP)** | Cattle, Small ruminants, Piggery, and Poultry |

### Table 1.9: Selected Indicators of Macroeconomic Performance

| Agriculture | % Share of GDP | | | | % Share Employment | |
|---|---|---|---|---|---|---|
| | 2001 | 2003 | 2006 | 2008 | 2003 | 2007 |
| Crops | 25 | 28 | 32 | 32 | 71,8 | 61,3 |
| Livestock | 2 | 3 | 3 | 3 | 0,3 | 0,4 |
| Forestry | 6 | 5 | 4 | 3 | 0,1 | 0,4 |
| Fisheries | 7 | 8 | 8 | 8 | 0,2 | 1,7 |
| **TOTAL** | **40** | **44** | **47** | **46** | **72,4** | **63,8** |

Source: PRSP; Note that GDP Stats differ slightly from Statistics Sierra Leone estimates.

The most binding constraint at present is the lack of irrigation infrastructure which confines production to one harvest per year instead of three which could be achieved in the inland valley swamp zones under irrigated conditions. The constraint of improved seed varieties is currently being addressed through the generation and wider dissemination of NERICA ('New Rice for Africa') seed variety. This variety, developed with the help of the West Africa Rice Research Association (WARDA) has been proven to produce higher yields, not only in research conditions, but in farmers' fields as well, so dissemination is well underway. Consequently, whereas NERICA rice trials were originally being piloted on a trial basis in four districts of the country, it is now in demand in all districts and the challenge now is to achieve large scale seed multiplication to satisfy demand. Figure 1.3 identifies that progress with respect to rice production is being made on two fronts, including an expansion of acreage devoted to the crop as well as productivity gains from increasing average yields.

## EXPORT CROP PRODUCTION

Prior to the war, Sierra Leone was a net exporter of several commodities including cocoa, coffee, ginger, palm kernels, piassava and rubber. The nation also produced tobacco and exported cigarettes from a single factory which was later destroyed in the war. The conflict brought about a crushing decline in cash crop production and since the advent of peace only cocoa exports have begun to recover.

The pattern of cocoa and coffee exports by tonnage is depicted in Figure 1.4. UNDP emphasized the substantial potential of cocoa to rebound as an economically viable export crop in its 2006 DTIS study but discouraged the further production of coffee due to declining demand and low returns from Robusta varieties.[24] Cocoa production has indeed rebounded, now occupying the

### Table 1.10: Production Trends for Key Food Crops Since 2002

| MT, Thousands | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 7ry Growth |
|---|---|---|---|---|---|---|---|---|---|
| **Rice** | 422 | 446 | 542 | 527 | 875 | 638 | 640 | 640 | 52% |
| **Cassava** | 896 | 1091 | 1759 | 2287 | 2973 | 1237 | 1894 | 1894 | 111% |
| **Sweet Potato** | 45 | 74 | 153 | 153 | 168 | 158 | 110 | 110 | 144% |
| **Groundnut** | 98 | 117 | 152 | 57 | 115 | 119 | 57 | 57 | -42% |
| **Maize** | | | | | | | 23 | 23 | 0% |

Source: PRSP and Jt. Progress Report on Agenda for Change, Sept. 2010.

24 *Sierra Leone: Adding Value Through Trade for Poverty Reduction , A Diagnostic Trade Integration Study,* UNDP October 27, 2006

## Table 1.11: National Rice Production and Self-Sufficiency Ratio

| Year | Area (Ha) | Yield (Mt/Ha) | Production (Mt) | Milled Equivalent (Mt) | Population | National Requirement (Mt Milled) | Self-Sufficiency (%) |
|---|---|---|---|---|---|---|---|
| **1997** | 360 789 | 1,14 | 411 300 | 246 780 | 4 382 360 | 455 765 | 54,15 |
| **1998** | 320 517 | 1,16 | 371 800 | 223 080 | 4 465 625 | 464 425 | 48,03 |
| **1999** | 212 137 | 1,17 | 248 200 | 148 920 | 4 550 472 | 473 249 | 31,47 |
| **2000** | 166 387 | 1,19 | 198 000 | 118 800 | 4 636 931 | 482 241 | 24,63 |
| **2001** | 258 850 | 1,2 | 310 620 | 186 372 | 4 725 033 | 491 403 | 37,93 |
| **2002** | 343 142 | 1,23 | 422 065 | 253 239 | 4 814 808 | 500 740 | 50,57 |
| **2003** | 356 506 | 1,25 | 445 633 | 267 380 | 4 906 290 | 510 254 | 52,4 |
| **2004** | 426 772 | 1,27 | 542 000 | 325 200 | 4 999 509 | 519 949 | 62,54 |
| **2005** | 427 907 | 1,29 | 552 000 | 331 200 | 5 094 500 | 529 828 | 62,51 |
| **2006** | 422 556 | 1,33 | 562 000 | 337 200 | 5 216 890 | 542 557 | 62,15 |
| **2007** | 432 356 | 1,36 | 588 004 | 352 802 | 5 343 200 | 555 693 | 63,49 |
| **2008** | 475 592 | 1,43 | 680 097 | 408 058 | 5 473 530 | 569 247 | 71,68 |
| **2009** | 523 151 | 1,5 | 784 727 | 470 836 | 5 607 930 | 583 225 | 80,73 |
| **2010** | 575 466 | 1,58 | 909 236 | 545 542 | 5 746 800 | 597 667 | 91,28 |
| **2011** | 633 013 | 1,66 | 1 050 802 | 630 481 | 5 890 080 | 612 568 | 102,92 |
| **2012** | 696 314 | 1,74 | 1 211 586 | 726 952 | 6 037 660 | 627 917 | 115,77 |
| **2013** | 765 946 | 1,83 | 1 401 681 | 841 009 | 6 190 280 | 643 789 | 130,63 |
| **2014** | 842 540 | 1,92 | 1 617 677 | 970 606 | 6 348 350 | 660 228 | 147,01 |
| **2015** | 926 794 | 2 | 1 853 588 | 1 112 153 | 6 506 420 | 676 668 | 164,36 |

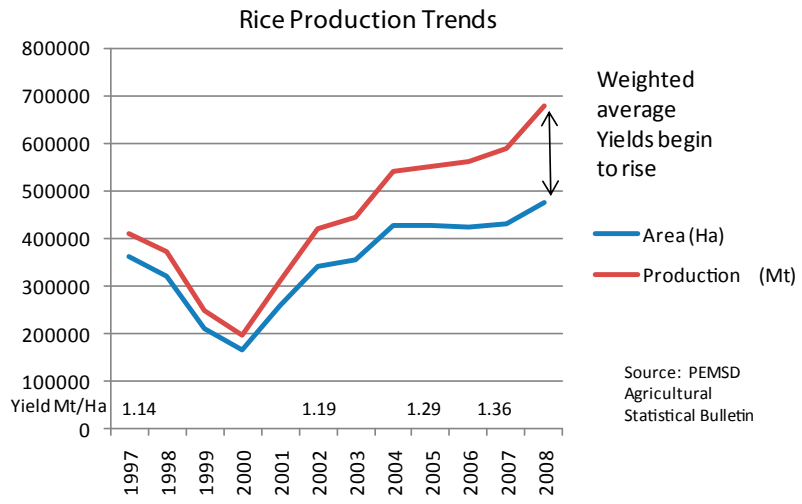
Source: Agricultural Statistical Bulletin, Vol. 1a, July 2009.
From 2009 onwards is a forecast

position of second most important export after mineral resources and rising from $5.66 million in export earnings in 2005 to $11.37 million in 2009. Palm oil is now in short supply and no longer an official cash crop export. Output is not sufficient to cover domestic consumption and Government periodically places cross-border trade in palm oil under a temporary export ban.

Further recovery and competitiveness in the export crops sector is essential as a source of foreign exchange to enable GOSL to meet its import bill.Government is encouraging farmers to practice farming as a business, including an emphasis on cultivation of export-oriented tree crops, measures which it is supporting through its Smallholder Commercialization Programme 2010-2015 through which a good number of donor partners are channeling support.[25] GOSL is also encouraging private sector participation and investment in cash crop production, especially for establishment of large scale plantations. Constraints to this sub-sector include similar factors applicable to food crop production, especially the inaccessibility of production zones during the rainy season.

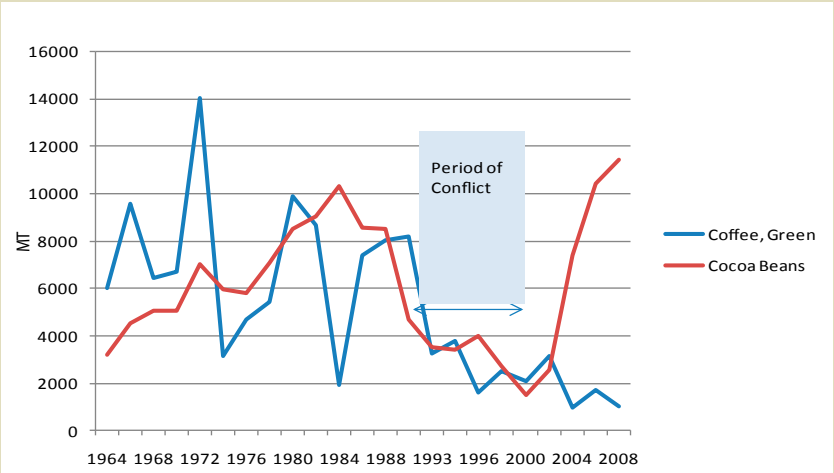
Investment in improved feeder roads with links to all-weather roads leading to the national port would go a long way to redressing this situation. Private investment in plantations is particularly constrained by the system of

## Figure 1.3: National Rice Production Trends: Area Expansion and Productivity Gains




25 Development partners supporting the SCP include JICA, EU, Irish Aid, DFID, Italian Cooperation, Gov't of Germany, Gov't of China, USAID, WB, IFAD, ADB and NGO partners.

**Figure 1.4: Cocoa and Coffee Exports from Sierra Leone over Four Decades**




community ownership of land under the governance of paramount chiefs. Policies are being developed to find ways to permit the leasing of land and thereby reduce the impact of this constraint on production of export crops.

## LIVESTOCK AND POULTRY

Sierra Leone's livestock population was decimated during the war and much of it may have "wandered" over the border into Guinea. Livestock numbers have begun to rebound as presented in Table 1.12, reaching about the level of stocks on hand before the war. At the same time, the informality of livestock trade combined with a lack of phyto-sanitary controls and inadequate quarantine systems have meant that diseases have been imported into Sierra Leone that are now retarding the recovery of small ruminant populations. This constraint could be addressed if the country were able to construct border posts that would facilitate trade and promote the application and enforcement of sanitary standards, quarantine systems and generally channel informal flows into formally sanctioned trade. On a comparative basis, it is likely that Guinea and countries to the north are better suited to the production of livestock and Sierra Leone imports a good deal of its meat supply from Guinea. An increase in cross-border trade between Sierra Leone and Guinea would likely enhance the competitive advantages of each country and encourage greater respective specialization in rice versus livestock.

## FISHERIES

Sierra Leone's coastal location provides another aspect of comparative advantage relative to inland countries in ECOWAS. With a 550km coastline and an EEZ of about 157,000 km$^2$, Sierra Leone's marine waters are endowed with numerous high value species such as shrimps, lobsters, cuttlefish, croakers, threadfins, sole, breams and snappers. There are, however, concerns about fishing above sustainable replenishment rates which, together with poor adherence to sanitary standards, have led to the banning of exports to the EU. Aside from the ocean, Sierra Leone has extensive inland bodies of water including lakes, rivers, estuaries and flood plains, all richly endowed with fish resources. Fisheries are far more important than livestock, providing 8 % of GDP in 2010 and supplying an estimated 80% of total animal protein into the national diet. It is thus vital not only for economic growth but also for food security that contributes to key nutritional needs. The fisheries sub-sector includes two segments, artisanal and industrial fishing. Small-scale artisanal fishing represents an important source of employment, providing livelihoods for an estimated 30,000 fishermen and 200,000 others involved in the processing and marketing distribution chain.

Women dominate the trade in dry smoked fish, a product which is in demand both locally and in the sub-region, while men dominate the wholesale frozen fish trade. Industrial fishing is highly capital intensive and provides a greater revenue source for government but the segment is foreign-dominated and is fraught by problems of illegal, unreported and unregulated fishing activities. It has been estimated that Sierra Leone could capture an additional $50 million annually from better management of its fishery resources, by cutting illicit fishing in half, quadrupling domestic benefits from industrial fisheries and expanding the value of artisanal catch by 33 %.[26]

### Box 1.4: Land Ownership and Tenure Systems in Sierra Leone

**Private ownership (free hold)**

- Recognized only in Western Peninsula

**Chiefdom and Communal Systems**

- No member of a family can usurp the right of another member to the land;
- Every member of the family is entitled to a portion of the land to cultivate to feed himself and his family;
- No member can dispose of any portion of the land without the consent of the Paramount Chief;
- Land cannot be sold.

The community represented by the Paramount Chief exercises the rights of allocation and usage over all its lands.

26 Concept Note for a Regional Fisheries Project for co-financing by IDA Regional Funds and Global Environment Fund.

### Table 1.12: Livestock Production 2002-2009

| Livestock, 1000s | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 7 yr Growth |
|---|---|---|---|---|---|---|---|---|---|
| Cattle (Head) | 100 | 120 | 150 | 200 | 313 | 345 | 391 | 470 | 370% |
| Goats (Head) | 250 | 300 | 350 | 450 | 548 | 630 | 530 | 730 | 192% |
| Sheep (Head) | 200 | 235 | 300 | 375 | 469 | 540 | 470 | 620 | 210% |
| Poultry | | | | | | 5202 | 6503 | 8600 | 65% |

Source: PRSP for Years 2002-2007, Jr. Progress Report on Agenda for Change for 2008, 2009, Poultry Statistics.

Cognizant that illegal fishing is a serious problem, Government has created a Joint Maritime Committee under the National Security Council to coordinate the actions of eight government institutions charged with ensuring maritime protection and fish stock preservation. Assistance has been received from the US Navy and Coast Guard in this effort. While it is favorable that the issue is receiving high national attention, this is the kind of persistent enforcement problem which is more feasible to tackle on a coordinated basis by all of the countries in the Mano River Union and, to that end, they have embarked upon a regional fisheries development project. Overall, the fisheries sector is an important contributor to national welfare insofar as it provides employment to coastal populations who are among the poorest in the country, including women, and it provides the majority source of protein for the nutritional well-being of the population. The binding constraints faced by the sector relate to the threat of depletion from over-fishing by foreign trawlers and the corresponding need to devote security resources to enforcement measures. The country could make good use of better wharves, fishing piers and cold chain infrastructure to support this effort as well as an improvement in the national fleet.

## TIMBER AND FOREST PRODUCTS

Forestry contributes a minor and declining share of Sierra Leone GDP, declining from 7 % at the end of the war to below 3 % and 0.4% of employment at present. Table 1.13 identifies that Sierra Leone shares the "Upper Guinea" forest ecosystem with Guinea, Liberia and Guinea Bissau, but forest resources are under severe threat from over-exploitation and some of the plant and animal species in Sierra Leone's forest zones are now under threat.

Measures are being developed to conserve indigenous forest cover while also introducing commercial and community forests to meet the country's extensive need for charcoal.[27] At present, 87 % of total energy use in Sierra Leone is biomass in the form of wood and charcoal. The provision of alternative sources of power supply would do much to diminish the pressure on remaining forest cover, whether through extension of the national grid or via distribution of solar energy devices which are being encouraged to supply lighting, household energy systems and crop drying. Future development of timber and forest products as a productive segment of the economy must be developed within a Sustainable Forest Management scheme. Climate change in the sub-region is a concern with the upper Guinea forest ecosystem depleting at an alarming rate.

As a whole, it is clear that the agricultural sector is of vital importance to stability and welfare of Sierra Leone and it explains why the GOSL placed primary emphasis on recovery of this sector in the post conflict period. Sierra Leone's development partners have likewise responded to assist with this sector and Table 1.14 identifies that 75 projects have been launched across all segments of agriculture and while sizeable pledges have already been committed, GOSL still aspires to raise almost half a billion US $ more to sustain the development of the sector.

## THE CONTRIBUTION OF THE MINERALS AND MINING SECTOR

Figure 1.2 and Table 1.7 both identify that the minerals sector has been contracting in the post-conflict era. This is a natural consequence of the decade of conflict. Mining operations came to a halt during the civil war leading to the virtual collapse of

### Table 1.13: Forest Resources in Sierra Leone and Regional States

| Natural Resource Endowment | | Fragile Fringe Countries | | | | Comparisons & Benchmarks | | |
|---|---|---|---|---|---|---|---|---|
| | | Sierra Leone | Guinea | Liberia | Guinea-Bissau | Ivory Coast | Nigeria | Africa |
| % Forest Area | 2007 | 37,92% | 27,07% | 31,50% | 72,98% | 32,82% | 11,28% | 21,32% |
| Animal Species Threatened | 2008 | 47 | | | | | | |
| Plant Species Threatened | 2008 | 47 | | | | | | |
| Pop Density/ people per sq. km. | 2008 | 77,63 | 40,02 | 39,38 | 56 | 64,75 | 166,14 | 3 347 |

Source: African Development Indicators, World Bank.

27 PRSP II, Ibid, page 59.

the sector and the country gained a highly negative reputation for its illicit trade in "conflict diamonds". Since 2002, with assistance from UN, World Bank and DfID, Government has sought to reform the mining sector, starting first with the adoption of a Kimberly diamond certification process to ensure the supply of certified and traceable diamonds into world markets and moving from that to the development of a new mining policy and legislative framework. GOSL deemed it essential for national security to de-emphasize mining in the immediate post conflict era and to concentrate on revitalizing the agricultural and other sectors instead. At the same time, Sierra Leone has a rich endowment of precious, base and ferrous metals, as well as rutile and other industrial minerals, the full extent of which is not even known as new discoveries continue to be made. Recently, petroleum and gas have been discovered off-shore and measures are underway to evaluate these resources. Figure 1.5 presents the spatial distribution of known mineral deposits within the country.

To date, mineral wealth has been more curse than gift to the nation and the Government of Sierra Leone has rightfully taken a cautious approach to revitalizing this sector, allocating it a back seat in the overall poverty reduction strategy. The mining sector comprises three sub-sectors including artisanal mining of precious metals (principally surface-level diamonds and gold), industrial mining of precious metals, and industrial mining of non-precious ores. In the early post-independence era, the mining sector provided 20 % of GDP, 15 % of fiscal revenue and more than 70 % of foreign exchange, mostly from the export of diamonds. Mining and quarrying were estimated in the 2007 CWIQ to account for 2.6 % of employment, up from 1.1 % in 2003. Prior to the conflict, the artisanal mining sector provided an estimated 300,000 jobs and was an important source of livelihood for youth. These data portray the fact that the potential in the sector is much different than its current performance and contribution to the economy.

Table 1.14: Agricultural Sector Project Development Portfolio

| Project Category | # of Projects | Est'd Cost (USD) | Committed (USD) | Disbursed (USD) | Gap: Cost-Committed |
|---|---|---|---|---|---|
| Food Production | 27 | $316 174 813 | $70 437 125 | $34 230 846 | $245 737 688 |
| Agricultural Infrastructure | 6 | $45 063 329 | $25 431 554 | $5 430 640 | $19 631 775 |
| Agric Export Promotion | 1 | $1 623 162 | $649 265 | $228 544 | $973 897 |
| Ag Micro-Enterprise Dev't | 9 | $48 533 282 | $9 868 845 | $8 563 357 | $38 664 437 |
| Food Processing | 9 | $49 810 725 | $13 063 344 | $11 128 489 | $36 747 381 |
| Fisheries & Marine Resources | 5 | $19 610 992 | $18 097 898 | $14 131 732 | $1 513 094 |
| Unspecified | 18 | $202 352 075 | $84 783 908 | $64 294 066 | $117 568 167 |
| TOTALS: | 75 | $683 168 378 | $222 331 939 | $138 007 674 | $460 836 439 |

Source: DACO Website http://dad.synisys.com/dadsierraleone.

Diamond exports have resumed trading through formally sanctioned channels, reaching a new high of $141.8 million in 2007 before dipping back to $99 million with the global recession in 2008. Though mining represents a minor share of GDP as compared to its potential, the sector remains important for exports and as a potential generator of employment in the future.[28] Mining currently contributes 55 % of exports, largely through the shipment of diamonds to Belgium, but industrial extraction of rutile, iron ore and gold is now getting underway and the IMF estimates that there will be a substantial one-time jump in domestic resource mobilization pertaining to mineral royalties that will multiply approximately ten-fold the contribution of this sector to the national budget. At the same time, the IMF has observed that GOSL has awarded concession contracts with overly generous tax concessions which would probably not be necessary to attract FDI.

Obstacles to further development of the minerals sector are numerous, including poor roads, lack of rail transport, the poor state of repair of port facilities for bulk mineral handling and the lack of electricity. These conditions mean that companies presently running mining operations must be largely self-sufficient in addressing their infrastructure requirements and this could lead increasingly to an enclave orientation within the industrial mining sub-sector. Sierra Leone failed to meet the compliance with EITI transparency standards in 2009 and is determined to come up to standard by 2012. At present, Employees in artisanal mining suffer from a different standard in terms of pay and benefits as compared to that offered by companies, and the relationship between mining companies and local companies is generally not good. The conscription of youths into mining labor remains a problem and HIV/AIDS is more prevalent in these areas.

## THE CONTRIBUTION OF TOURISM

Sierra Leone is a country with particular endowment in tourism assets, notably beautiful white sand beaches, mountains, islands, tropical scenery and wildlife, relative proximity to Europe plus a special culture and history. These gave the nation enough attractions to enable the development of a small but growing holiday tourism industry back in the 1980s.

The industry collapsed during the war but in their 2006 study on trade development for Sierra Leone, UNDP estimated that the country could try to regain its competitiveness in tourism and could manage the sector so as to capture maximum potential value added into the local economy, thereby creating direct and indirect jobs and

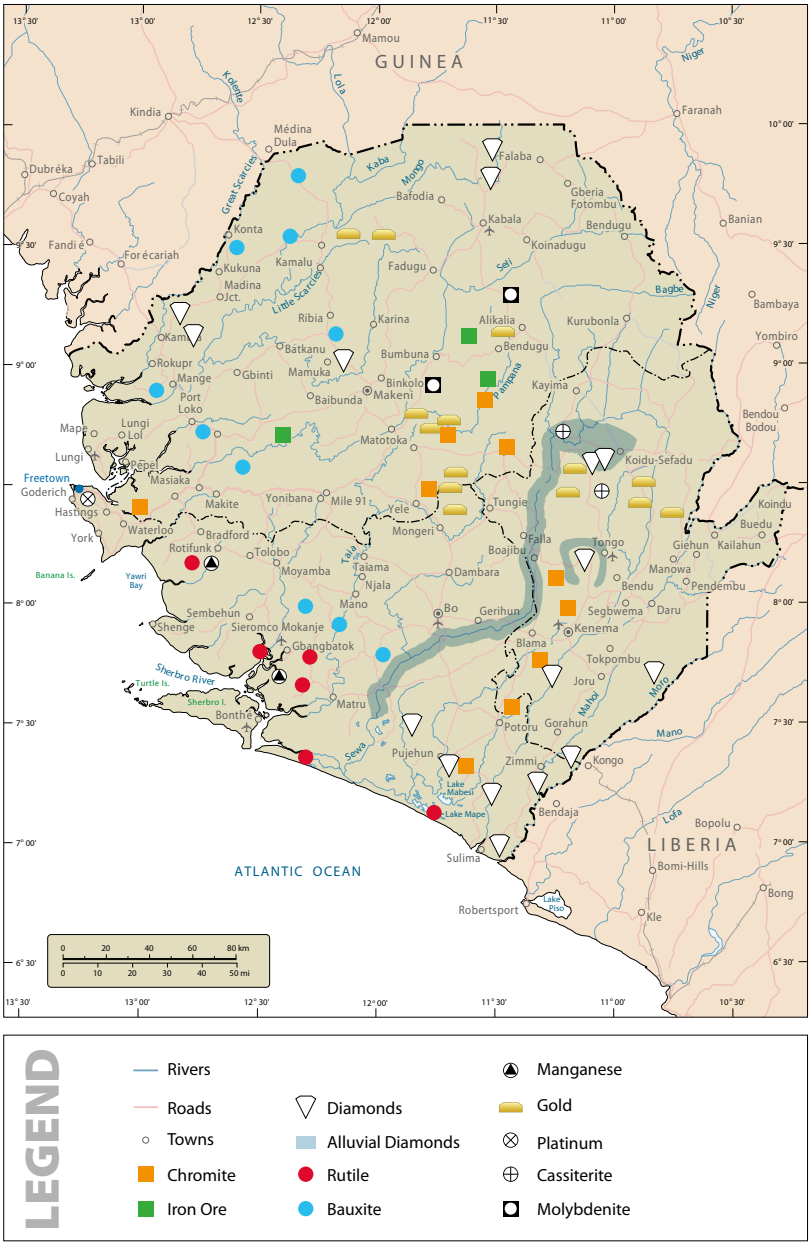
28 Mining statistics differ radically between sources. That which is presented is sourced from the African Statistical Yearbook, 2010 compiled by AfDB and ECA and this data has been confirmed in interviews with GOSL. The Jt. Progress report on PRSP indicates that mining contributes 30% of GDP but this is erroneous and is more likely meant to reflect the potential of this sector for the Sierra Leone economy in the future.

foreign exchange receipts.[29] Sierra Leone has made the choice to resurrect its tourism industry and the Ministry of Trade has developed a competitiveness strategy for the sector.

Private sector investment is gradually being mobilized for the refurbishment or new construction of beach hotels but progress is slow. Sierra Leone believes it can re-establish competitiveness in this sector and there is a new surge of private sector investment to restore, refurbish or build new infrastructure for this purpose. Overcoming the legacy of violence to restore the 'Sierra Leone' tourism brand will take time and a reputation for stability is an essential criterion for achieving that outcome.

Government reports that revenue from the tourism sector stagnated between 2008 and 2009, coinciding with the closure of a number of aged hotels which were not up to grade. Figure 1.6 on sector GDP includes hotel and restaurant industry data within the statistics on wholesale and retail trade but Table 1.7 reveals that hotels and restaurant business contracted in three of the past five years. However, jobs have begun to resume, rising from 14.4 in 2003 to 19.8 % in 2007 but a good deal of that is thought to relate to the resumption of other trade sectors. Government continues to work towards attracting investment into the tourism industry and showcased the opportunities at the London investment promotion fair organized by Sierra Leone Export and Investment Promotion Agency. One major "hassle factor" constraining growth of this sector is the inconvenient location of the airport at Lungi and the difficult logistics of reaching Freetown or the tourism cluster developing along Lumley Beach. In addition, congestion in Freetown and the lack or urban planning leading to unregulated sprawl along the Aberdeen coastline mean that Sierra Leone must develop new, virgin coastal zones if it is to truly compete with alternative

## Figure 1.5: Spatial Distribution of Identified Mineral Resources in Sierra Leone




Source: ACA Hower Mano River Resources, Inc.

## Box 1.5: Tourism Beauty

29 Sierra Leone: Adding Value Through Trade for Poverty Reduction , A Diagnostic Trade Integration Study, UNDP October 27, 2006.

sun and surf destinations in the global tourism market. This could be better achieved if the country were to pursue an ambitious plan of investing in a tri-partite infrastructure package that would serve to bring out the economic potential of the Lungi peninsula.

## THE CONTRIBUTION OF OTHER PRODUCTIVE SECTORS OF THE ECONOMY

Construction has experienced modest recovery in the past decade, growing slightly faster than the economy from a 1.8 % share in 2001 to a 2 % share in 2010, with share of employment rising from 1.2 % to 1.9 %. Manufacturing has not done as well and continues to suffer from the destruction of agro-processing plants during the conflict, remaining stagnant while the remaining economy begins to revive.

Beginning the decade at 3.2 % of GDP, it now contributes 2 % of GDP and 1.9 % of jobs reflecting that private investment has not yet resurrected or replaced the manufacturing base that existed pre-war. This situation has not been helped by the fact that the power sector has been in severe disarray, with a decline in the distribution capacity beyond the central consumption core based in Freetown. Without doubt, improvements in the power sector will aid the resumption of agro-processing and will open the way for introduction of mineral transformation.

The finance, insurance and real estate sectors have basically managed to keep pace with the general growth of the economy but contribute only 0.7% of employment. The financial sector is dominated by retail banking institutions, including some that are state-owned and slated for privatization, and the sector is struggling to update its relevance to a needy economy. Financial institutions continue with an orientation towards asset based lending, low-risk short term loans and are presently offering inadequate services for agriculture, medium and long term infrastructure investment, trade credit and export guarantees or cross-border payment services. Consequently, the financial sector is struggling to gain relevance in a more global world and the first glimmer of progress is just now on the horizon with the first attempts to embrace ICT technology to improve payment systems and reduce transaction costs. The productivity of this sector will gain a major boost from improved cable internet infrastructure, not only because it will reduce costs and enable better adoption of technology, but also because it will permit better integration with correspondent banks in the ECOWAS region and beyond. Nonetheless, the weaknesses of the financial sector presently ripple throughout other sectors of the economy.

Utilities and infrastructure contribute about 12 % of GDP and 2.4 % of employment. Detailed examination of the current condition of infrastructure sub-sectors is reserved for further treatment in section 1.4 of Chapter 1. Figure 1.2 and Table 1.7 reveal that government, together with development partners, has been devoting significant attention to the delivery of social services to the country, causing health, education and other services to contribute about 13 % of GDP. This is seen as essential for stability, to redress the imbalance in services that contributed to inequality in the past and to redress the low condition of human development prevailing in Sierra Leone.

## CURRENT SITUATION IN PUBLIC SECTOR ADMINISTRATION AND CAPACITY

The capacity of government institutions experienced a serious decline over decades and this was further degraded during the civil conflict. Public service reforms were not implemented as planned under Sierra Leone's first poverty reduction strategy, so GOSL recognized that the lack of capacity in all Ministries, Departments and Agencies (MDAs) would need to be addressed in order to achieve the successful implementation of a next generation of development and investment programs. Acute shortages of required expertise and poor motivation were deemed to pervade government institutions after the conflict, so in order to carry out mandates, reconstruction relied heavily on commissions and PIUs that bypassed the public service. GOSL now strives to gradually phase out such arrangements and replace them with longer-term support that strengthens the ability of government to formulate and coordinate development policy and deliver basic services on a sustained basis. This will remain difficult and will take an extended period given the capacity gaps which are further identified below.

Significant work has been undertaken to lay the foundations for public sector reform, entailing a governance and civil service reform program geared at revitalizing the civil service and rationalizing structures, functions, procedures and staffing in MDAs.

Activities undertaken have included introduction of a new Civil Service Code, comprehensive pay and grading reform and the development of a Public Sector Reform Strategy. Low pay has represented a fundamental obstacle to promoting effective reform and capacity development across government so new measures have been introduced to create an enabling environment to attract and retain good personnel through an incentive-based remuneration system. Cabinet approved a Public Sector Pay Policy Framework in January 2007 and a revised grading system and a revised pay structure for the entire public service has come into effect.

At the same time, the civil service was recognized as being severely under-staffed at senior and technical levels while over-staffed at lower levels where "ghost workers" were drawing pay or where employees are lacking basic education, skills and expertise. There is, in effect, a "missing middle" and the country faces an added problem of the imminent retirement of many of its most senior public servants. The Director of the Public

Sector Reform Unit was quoted in 2008 as saying, "89% of our work force is either barely skilled, semi-skilled or totally unskilled."[30]

The size, cost and composition of public sector employment[31] of the civil service is currently being transformed through various mechanisms that include the purging of ghost workers, laying-off temporary workers, privatizing and outsourcing, combined with expanded hiring in other areas. For instance, the number of people in military service has declined given peace-time conditions while the number of police has grown from 7,338 in 2002 to 9,455 in 2008. There has been a need to expand the hiring of teachers and health workers to make up for extreme personnel shortages in these areas. Table 1.15 presents data which depicts the evolution of the public service up through 2008.

The cost of the civil service is comparable to the regional average but challenges remain in the composition and management capacity within the public services. Key contributors have been the flight of technical skills into the Diaspora during the conflict, low remuneration (now being addressed) and the severe hardship conditions and lack of public services in up-country locations which make rural postings unattractive.The capacity to implement policies and programs is therefore very low and the consequences are apparent across many sectors.

As part of the public sector reform initiative, GOSL has revived the Civil Service Training College in conjunction with external service providers and is seeking the support of development partners to build capacity in critical areas of competency such as procurement, financial management, strategic management and policy development as these represent urgent Government priorities. New

**Table 1.15: Evolving Composition of the Public Service, 2002-2008**

| | 2002 | 2005 | 2008 |
|---|---|---|---|
| **Total Employees a/** | **61 871** | **61 858** | **70 633** |
| Civil Service b/ | 17 015 | 15 526 | 16 521 |
| Military | 16 556 | 12 220 | 10 499 |
| Police | 7 338 | 8 379 | 9 445 |
| Teachers | 20 962 | 25 733 | 34 168 |
| **Total Employees %** | **100%** | **100%** | **100%** |
| Civil Service b/ | 28% | 25% | 23% |
| Military | 27% | 20% | 15% |
| Police | 12% | 14% | 13% |
| Teachers | 34% | 42% | 48% |
| **Wage Bill (Le Blns)** | **144,90** | **229,90** | **333,50** |
| Civil Service b/ | 66,10 | 97,80 | 152,40 |
| Military | 23,60 | 34,00 | 39,50 |
| Police | 12,00 | 20,60 | 28,00 |
| Teachers | 43,20 | 77,50 | 113,60 |

a/ Excludes subvented agencies & small no. hired by local councils
b/ Includes the judicial sector
Source: SL PER, Report No. 52817 SL, The World Bank, October 2010

positions are being made more attractive through changes in pay and grades and recruitment targets for skilled technical staff have been set across the public sector. Nonetheless, MOF reports that the wage bills for teachers and police were lower than budgeted in 2009 as the planned hiring additional teachers was not able to be fully implemented[32]. On the other hand, wage bills for MAFFS was 85% lower than the revised budget due to the successful completion of a payroll verification exercise and removal of ghost workers.

Sierra Leone estimates that retirement may worsen the skills shortage in the near future given that as many as 49% of those in higher grades are eligible to retire in the next five years. The upshot is that the strengthening of the public sector will take ten years on a realistic basis and the recommendation advanced in the World Bank PER is that restructuring should be implemented for a few key ministries at a time rather than all at once. These conditions have significant bearing upon the implementation of investment programs in the infrastructure sector and point to the need for approaches that (i) continue to bring in Diaspora or foreign technical assistance for implementing reform programs and to oversee investment projects, (ii) arrange for on-the-job twinning and training to build capacity of local national counterparts and (iii) making recourse to PPPs with substantial foreign involvement both for investment and for operations.

The latter strategy is further constrained by two additional factors, notably the weaknesses of the indigenous private sector (discussed below) and the lack of senior public sector personnel with expertise in PPP implementation.

At the same time, Sierra Leone has built up a highly relevant skill base within the National Commission for Privatization and it is recommended that GOSL consider tapping this capacity when it takes subsequent steps to set up its PPP unit forthcoming when newly prepared legislation in this sphere is introduced. Further suggestions about measures to improve the effectiveness of Government's PPP unit are discussed in section 3.7 of Chapter 3.

30 Quote extracted from Sierra Leone Public Expenditure Review, Report No. 52817 SL, The World Bank, October 2010, page 85.
31 The public service includes all those paid from the national budget, but the "civil service" excludes the military, police, teachers, judicial sector employees and a small number of directly hired local authorities.
32 Economic Bulletin 2010, Sierra Leone Ministry of Finance and Economic Cooperation with TA from JICA, May 2010.

## CURRENT SITUATION IN SIERRA LEONE'S PRIVATE SECTOR

Sierra Leone suffers from a small and poorly developed private sector. Capacity was further decimated during the war but the sector also suffers from dualistic capacity between Sierra Leonean business leaders of indigenous origin versus those of foreign origin. Indigenous businessmen are few in number and they compete with a relatively more competitive and better financed cadre of Lebanese business interests which has been settled in the country for several generations.

A more recent phenomenon is the arrival of business interests of Chinese origin and this contingent is also beginning to take an active part in domestic private sector development. From a situation of disinvestment at the end of the war, private sector investment has risen rapidly, reaching over 10% of GDP, but much of this has been concentrated in a few sectors such as minerals, reflecting FDI and a concentration that has limited direct impact on growth or employment. Private sector investment thus needs to diversify into a broader range of sectors and begin to generate a larger number of jobs.

A reliable estimation of the size of the private sector in Sierra Leone comes from the 2006 Census of Business Establishments. The Census indicates that there are around 10,840 enterprises in Sierra Leone, of which only 3,400 are totally or partially registered.[33]

This data suggests that around 66 % of businesses in Sierra Leone are informal and shows a very narrow and underdeveloped private sector. As a contrasting benchmark, for example, Ghana has around 198,000 registered businesses, which implies a business density rate of 18.71 versus Sierra Leone's density rate of 1.34.[34] Moreover, given the high rates of business attrition, the rate of formal business formation of 4,000 new businesses per annum remains too low to expect a big shift in the business density in the next few years.

These conditions do not bode well for participation of the domestic private sector in infrastructure and PPPs for the future unless financing accommodations are made or accompanied by other capacity building measures. Interviews with development partners indicate that extensive measures are needed to accompany physical works and other forms of domestic participation in infrastructure contracts. A particular weakness is the lack of working capital available to indigenous private enterprises.

Although contractors can sometimes secure bank loans guaranteed by contracts, implementation under partner-financed projects is often disrupted, suspended or otherwise prone to delays and private contractors are ill equipped to absorb the financing costs related to such delays. Several development partners have observed limited capacity by domestic contractors to pre-finance works on rural feeder roads projects and it has become clear that measures to relieve the cash flow burden on domestic contractors would enable work to progress more smoothly despite the problem that such and approach would deflect private absorption of risk.

Consequently, the recommendation is that development partners continue to use their investment finance as a means by which to encourage greater capacity development in the private sector, but extra measures should be pre-designed into implementation approaches to recognize and mitigate the weaknesses which currently exist and allocate risks to the parties best able to control them.

Where a private contractor is not at fault for an implementation delay, possibly caused by downstream procurement processes or the like, partners might want to mitigate such risks.

## MEASURES TO IMPROVE THE BUSINESS CLIMATE

Sierra Leone has been placing a priority on reforming the environment for businesses, aiming especially to improve the investment climate for FDI by removing impediments to trade and investment. Due to concerted efforts, Sierra Leone's ranking has improved from a ranking of 156 in 2009 to 143 in 2011 on the World Bank's "Ease of Doing Business" Index, placing top among the Mano River Union states as a location to start a new business. Table 1.15 presents Sierra Leone's rankings on various factors affecting business climate using data that is comparable for MRU neighbors and other regional leaders. During 2009 an investment incentive package was developed for investors and approved by Cabinet and a national Private Sector Development Strategy was prepared and approved by the President.

The PRSP Progress Report of 2010 identifies the following new measures achieved to address the policy environment for conducting business:

- Elimination of the "Advance tax: The National Revenue Authority no longer requests advance tax payments from businesses to obtain a tax clearance certificate for business registration;
- Elimination of Exchange Control Permission: General Business Licenses are no longer a pre-condition pertaining to exchange controls;
- Elimination of mandatory involvement of a solicitor for the preparation of company establishment articles prior to registration, thereby reducing this start-up cost of doing business from an estimated $1700 to $79.
- Establishment of a one-stop shop for business registration at the office of the Registrar General.

33 "Unleashing the Talent of our People: A Strategy for Private Sector Development 2009 - 2013" Ministry of Trade and Industry, Nov. 2008.
34 Business density is defined as number of businesses per 1,000 economically active people.

Table 1.16: Business Climate Indicators of Sierra Leone and Neighboring ECOWAS Countries

| Business Climate | | Fragile Fringe Countries | | | | Comparisons & Benchmarks | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | Sierra Leone | Guinea | Liberia | Guinea-Bissau | Ivory Coast | Nigeria | Africa |
| Control of Corruption | 2008 | -1,07 | -1,35 | -0,6 | -1,16 | -1,17 | -0,92 | |
| Corruption Percept. Index | 2008 | 1,9 | 1,6 | 2,4 | 1,9 | | | |
| Gov't Effectiveness | 2008 | -1,13 | -1,39 | -1,36 | -1,26 | -1,39 | -0,98 | |
| Political Stability %ile | 2008 | 35,4 | 4,8 | 17,2 | 31,6 | | 3,3 | |
| Ease of Doing Business Rank | 2011 | 143 | 179 | 155 | 176 | 169 | 137 | |
| Days RQd to Start a Business | 2009 | 17 | 41 | 31 | 233 | 40 | | 45 |

Source: African Statistical Yearbook 2010.

It seems clear from the overall attention to reform measures that GOSL is serious about improving the business climate and enabling the private sector to play a much greater role in delivering economic growth.

## FINANCIAL SECTOR DEVELOPMENT

The lack of finance has been judged to be the greatest impediment to the SME sector which is, in turn, seen to be a critically important sector through which to create jobs for women and youth. Meanwhile, Sierra Leone's commercial banking sector is typically risk averse and retail oriented, geared towards meeting the short term financing needs of formal sector, large scale business.

In 2008, the PRSP II indicated that there were only about 197,000 bank accounts in commercial banks and Sierra Leone had one of the lowest bank branch penetrations in Africa. Credit to the private sector stood at 5 % of GDP, far below the sub-Saharan Africa average of 17%. Agricultural loans accounted for only 2 % of total loans even though it accounted for the majority of GDP and employment. There is an absence of trade finance and export guarantees and essentially no long term finance available from the ten or more banks operating in the country. From a policy perspective, GOSL's objectives in the financial sector are therefore to:

**1.** strengthen bank supervision

**2.** enhance banking competition

**3.** facilitate increased lending

**4.** combat money laundering and the financing of terrorism, and

**5.** improve the payments system for inter-bank transactions, increase the use of electronic payments and reduce the use of cash in the economy.

While progress is being made on most fronts, GOSL remains particularly wary of the threat to stability which could be caused by money laundering and the 'capture' of banking interests from purveyors of terrorism or illicit drug trade. In addition, because the private sector has been unwilling to expand lending on longer terms and this is needed if the domestic private sector is to be able to participate in the regeneration of industry, GOSL has decided not to privatize, but instead resurrect the National Development Bank.

A cabinet paper has been prepared and government will be looking to development partners, especially MDBs for advice on whether this is the best means of securing essential medium and long term financing for agriculture. All of the policy measures introduced vis-à-vis the financial sector are important and GOSL is encouraged to sustain the momentum towards bona fide implementation.

## KEY FINDINGS REGARDING SIERRA LEONE'S SOCIO-ECONOMIC SITUATION TODAY

This section has identified that Sierra Leone hit 'bottom' in social and economic terms after its decade of conflict, both relative to its own previous performance and relative to that of the rest of the world. The economy has begun to recover in many sectors and this is encouraging. At the same time, it is only just at the stage of regaining the real level of GDP per capita that prevailed in 1980 and the annual rate of growth is in decline. This is discouraging. What it may suggest is that the return of peace and stability has, for a significant proportion of the population, enabled people to return to the productive livelihoods they pursued before the war and this has undoubtedly been a significant contributor to growth. However, jobs in the mining sector have contracted, a large number of youth have relocated to urban towns and the capital, the formal sector is not yet providing them with jobs at an adequate rate and the agricultural sector is striving to expand production with a smaller, aging labor pool.

These elements suggest that much more change is needed to bring on a second wind of growth in order to propel Sierra Leone forward. That change must lead Sierra Leone vigorously into the twenty-first century and go beyond a resumption of past capacity.

It must encompass updated policies, competitive strategies, upgraded infrastructure, regional and global trade plus modern technology. Before turning to a deeper look at Sierra Leone's Agenda for Change which sets the policy course and vision for a more prosperous future Table 1.17 summarizes the obstacles constraining key productive sectors and identifies the contribution that improved infrastructure could make to addressing the identified gaps.

Table 1.17: Summary Findings on Constraints Inhibiting Productivity of Key Sectors.

| | Crops Production | Fisheries | Mining | Tourism |
|---|---|---|---|---|
| **General Constraints** | Declining soil fertility, insufficient input supply, use of unimproved seed varieties, lack of rural finance, insufficient processing equipment and poorly developed value chains to connect producers with markets. | Illegal, unreported and unregulated fishing by industrial fishing vessels in the EEZ. Estimated that Sierra Leone could capture an additional $50 million annually by cutting illicit fishing in half | Poor governance, corruption and the failure to meet EITI standards. Royalty legislation changing to improve sector contribution. Conscription of youths into mining labor remains a problem & HIV/AIDS is prevalent. | Industry collapsed during the war and the Sierra Leone "brand" has been tarnished by the legacy of "blood diamond" conflict. |
| **Infrastructure Constraints** | Shortage of post-harvest storage infrastructure, crop drying and sorting facilities plus rain-protected market installations. The state and density of rural feeder roads is a major constraint, as is the lack of all-weather roads to link major production zones with consumption centers. | Better wharves, fishing piers and cold chain infrastructure are needed to unlock the potential in fisheries, along with an improvement in the national fleet. | Poor road quality unable to take heavy weights; lack of rail transport, the poor state of repair of port facilities for bulk mineral handling and a dire lack of electrical power supply. | Inadequate & costly broadband internet and communications to support web-based tourism planning by potential clients. The inconvenient location of Lungi airport transfers to reach Freetown are an impediment to mining, tourism and all FDI-oriented sectors. |
| **Human Constraints: Public and Private Sector** | Sierra Leone's public sector capacity is severely depleted and the country must continue to rely on Diasport and expatriate TA for support in managing key investment programs. The indigenous private sector is equally weak but has capacity to undertake physical works if cash flow issues are mitigated and contractors are relieved of the burden of financing delays not of their own making. | | | |

# 3. The current status of trade

This Section diagnoses the current state of Sierra Leone's involvement in trade in order to identify how this sector is contributing to economic performance and to identify whether increased attention to trade policy or investment in infrastructure could relieve impediments currently constraining growth. This section examines both trade flows which take place within the ECOWAS region and trade that which is oriented towards destinations beyond Africa.

## SIERRA LEONE'S OVERALL PATTERN OF IMPORTS AND EXPORTS

Sierra Leone's trade balance has always been negative with imports out-pacing exports, and this has remained the case in the post-conflict era as illustrated in Figure 1.6. Imports have traditionally originated from Northern countries but there is a recent trend of expanding imports from Asia, especially China. Like most African countries, Sierra Leone has a small economy and trade is oriented towards Northern markets rather than neighboring states. The EU is Sierra Leone's largest single trading partner, buying an average of 80% of Sierra Leone's exports and supplying 30% of its merchandise imports. The Export Destination Index stood at 98.4 % in 2002 reflecting that most exports were of diamonds and these all went to Belgium. Specialization is rooted in basic comparative advantage, not competitiveness or industrial specialization. Through the Enhanced Integrated Framework supported by UNDP and other donors, the Ministry of Trade and Industry is presently working to update the Diagnostic Trade Integration Study undertaken in 2006 and determine the real competitive advantage of Sierra Leone productive capacity. Government recognizes that with an under-developed manufacturing sector, it will remain an importer of specialized and manufactured products for some time to come and it will likewise remain an exporter of primary products until industry begins to resume. Because the country has inadequate quality management systems enabling the sorting, grading and classification of agricultural produce, Sierra Leone remains a price taker in international markets. At the same time, Sierra Leone wishes to diversify exports so as to reduce national vulnerability to external shocks due to excessive reliance upon few products. While diversification of trading partners has improved under AGOA-enabled trade with the US, the lack of diversity among trading partners remains a concern. Sierra Leone currently benefits from the "Everything but Arms Initiative" with the EU which provides favorable access to the EU market but the new planned Economic Partnership Agreements (EPA) being negotiated between the EU and ECOWAS could have significant adverse impact on the economy unless the country is able to rapidly improve the competitiveness of its products and its expertise in the sphere of trade.

Export trade virtually collapsed in Sierra Leone during the conflict, but since the advent of peace, wholesale and retail trade has contributed a fairly steady 11% of GDP. The export growth rate rebounded dramatically by 23% in 2002 (due largely to a resumption of legalized trade in

diamonds) and recent growth has been on the order of 4 % per year[35].

Unlike the pre-conflict era, Sierra Leone no longer has a healthy array of agricultural export products (cocoa being one of the few survivors), and the national capacity to trade has been severely diminished. While the country has moved away from an import-substitution trade regime, its overall stance towards trade has been somewhat lethargic relative to the potential, especially with respect to the opportunity presented by inter-regional trade. Export bans are placed periodically on rice and oil palm exports which are in demand by neighboring states.

Sierra Leone Investment and Export Promotion Agency, (SLIEPA) is working aggressively to make an impact on global exports but devotes little or no focus upon cross-border exports. Their targets are to attract foreign investors persuaded by the potential which investment in globally tradable production can offer. Exports have begun to revive over the past decade as reflected in Figure 1.7.

Traditionally, and still today, Sierra Leone's largest exporting sector is the minerals sector. Official exports of minerals virtually collapsed during the conflict, not only of diamonds which played a central role as fuel for the conflict, but also of rutile which shut operations for a period. Tree crops, which include coffee and cocoa beans, began to stage their comeback in the middle of the decade with cocoa leading the way and coffee lagging way behind. Exports of fish and shrimp seafood products are also beginning to revive but are constrained by the lack of compliance with EU phyto-sanitary and sustainable fishing standards resulting in a ban on exports to that market. The "other" category of exports includes both products of national origin plus re-exports of foreign origin imports onwards to neighboring countries.

Since 2001, the minerals sector has achieved a degree of recovery on two fronts—absolute growth in value and volume of exports plus diversification from diamonds alone to inclusion of other mineral resources including ilmenite, bauxite, gold, zircon and rutile. Figure 1.8 identifies the composition of mineral exports which reflects the trend of mineral export recovery.

Table 1.18 identifies the fact that approximately 90 % of Sierra Leone's official trade takes place with parties outside of ECOWAS or Africa, both for exports and for imports. The sections below provide separate examination of the factors influencing extra-regional versus intra-regional export trade.

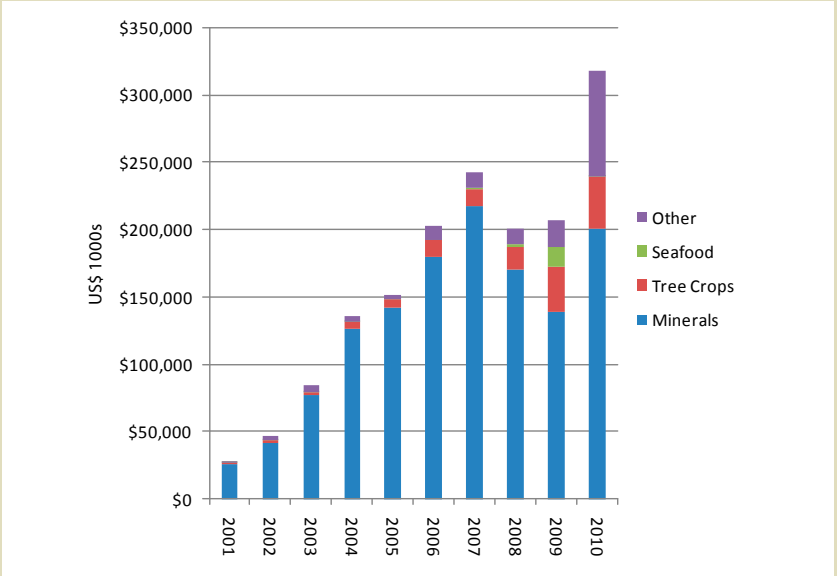
## EXTRA-REGIONAL EXPORT TRADE IN AGRICULTURAL COMMODITIES

Export trade of primary agricultural products to developed nations was an important contributor to GDP previously, but this collapsed during the civil conflict. Sierra Leone began

**Figure 1.6: Pattern of Sierra Leone Foreign Trade in US $**


Source: Sierra Leone Customs & Excise Department

**Figure 1.7: Composition of Sierra Leone Exports in Past Decade**




35 Bank of Sierra Leone

independence with a fairly broad array of export crops, including rubber, cocoa, coffee, palm kernel, ginger and piassava. Despite this endowment, it was not central to national economic policy to deliberately strive for export led growth. Instead, exports were valued for their capacity to generate foreign exchange and thereby fund the import bill. Consequently, tradable production was targeted at economies with convertible currency and thus was oriented towards extra-regional trade. The only globally traded agricultural commodity to have truly resumed export is cocoa beans as was depicted in Figure 1.4.

During the 1960s, palm kernels had represented the largest volume agricultural export, but as the country gradually installed processing plants, this was converted in the 1970s into exports of palm oil and palm cake for animal feed. As local demand grew and the plants were later destroyed during conflict, all such exports came to a stop. At present there is a single factory which has resumed business and the Marika Enterprise now produces palm kernel oil, cooking oil, organic fertilizer and soap. It ships the organic fertilizer to Europe and sells soap to Guinea. Statistics regarding coffee and cocoa depict a confusing situation whereby both production and exports have climbed upwards, but there remains a consistent gap between output and exports. This is presented in Table 1.19 and suggests that, on balance, Sierra Leone suffers some leakage of official exports of both cocoa and coffee.[36]

Though some weight loss would occur in the conversion of fresh berries to dried beans, this cannot account for the entire discrepancy between reported levels of production versus exports. A more likely explanation is that a good deal of Sierra Leone's cash crops are being sold across the border into Liberia and exported through the port of Monrovia or possibly into the market town of Nzérékoré in Guinea and out through Conakry. The latter direction of cocoa trade has been documented to occur for Liberian cocoa so it is plausible that the Sierra Leone's cocoa and coffee farmers are responding in similar fashion to seek the best possible prices for their crop by selling across borders.[37] Farming families are connected by cultural affinity and may hold land plots across borders between Eastern Sierra Leone and Western Liberia which contributes to the observed trading pattern. Despite this, there is little doubt that the fundamental factor at play in the trading pattern is that there are better roads connecting Sierra Leone's Eastern tree crop producing areas to Monrovia than there are connections to Freetown. Sierra Leone's roads in the Eastern region have been in severely deteriorated condition and the traders in Sierra Leone's cocoa value chain report that bad roads represent their most difficult constraint. Transportation time from Kailahun to Kenema takes one day in the dry season and increases to three days during the rainy season. Consequently, transport costs rise by at least one third in the rainy season.[38] As Sierra Leone is now in the process of rehabilitating trunk roads between Pendembu and Kailahun as well as feeder roads within Kailahun and Kono districts, there is increasing likelihood that extra-regional trade in cash crops will expand through Freetown port.

A key binding constraint to global trade in primary commodities also pertains to the absence of quality management

**Figure 1.8: Increased Diversification of Mineral Exports**

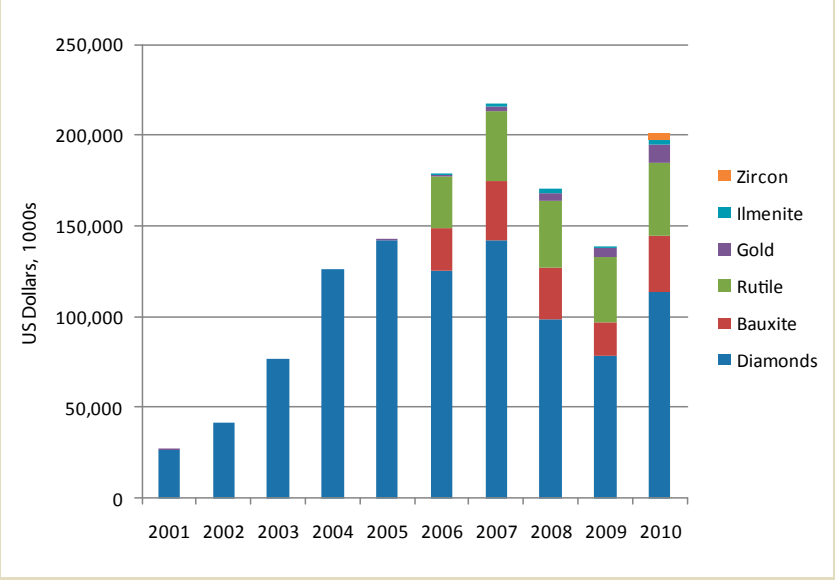



**Table 1.18: Sierra Leone's Geographic Trading Partners 2005 – 2009.**

| | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|
| **Export to:** | | | | | |
| ECOWAS | 1,15% | 2,68% | 2,27% | 1,48% | 4,99% |
| Rest of Africa | 1,09% | 0,89% | 0,65% | 1,35% | 3,55% |
| The World | 97,76% | 96,43% | 97,08% | 97,17% | 91,46% |
| | 100,00% | 100,00% | 100,00% | 100,00% | 100,00% |
| **Import from:** | | | | | |
| ECOWAS | 13,17% | 10,21% | 13,48% | 8,51% | 8,18% |
| Rest of Africa | 4,78% | 7,01% | 4,98% | 3,03% | 2,79% |
| The World | 82,05% | 82,78% | 81,54% | 88,46% | 89,03% |
| | 100,00% | 100,00% | 100,00% | 100,00% | 100,00% |

Source: ADB Statistics Department using UN Comtrade Database.

36 Production and exports data on coffee and cocoa differ by source, whether collected by FAO, MAFF or SL Customs and Excise, but all report the same pattern of discrepancy between production versus exports.
37 "Tree Crops to Ensure Income Generation and sustainable Livelihoods in Liberia: Unlocking the Potential of the Cocoa Sub-Sector," Sustainable Tree Crops Program, IITA 2004, pages 52-55.
38 "Cross Border Trade and Food Security: Liberia and Sierra Leone," FEWSNET and USAID, May 2010, page 20.

Table 1.19: Discrepancy between Production and Exports of Sierra Leone Cocoa and Coffee

| Year | Cocoa, MT | | Coffee, MT | |
|---|---|---|---|---|
| | Produced | Exported | Produced* | Exported |
| 2000 | 10 920 | 1 412 | 24 986 | 1 981 |
| 2001 | 10 920 | 641 | 24 986 | 75 |
| 2002 | 13 000 | 1 178 | 29 832 | 947 |
| 2003 | 16 000 | 2 733 | 38 781 | 113 |
| 2004 | 20 900 | 6 187 | 51 341 | 118 |
| 2005 | 24 035 | 7 169 | 63 022 | 1 039 |
| 2006 | 30 902 | 2 502 | 76 905 | 693 |
| 2007 | 35 523 | 7 384 | 88 441 | 717 |
| 2008 | 40 851 | 17 893 | 101 709 | 1 958 |

PEMSD, Agricultural Statistics Bulletin, Vol. 1, July 2009*
Denotes tonnage of fresh coffee berries

systems and the domination of marketing chains by a small number of traders. To address this problem, Sierra Leone has established a new Produce Marketing Company that will be charged with introducing quality standards, sorting and classification systems and certification systems. The intention is to provide farmers with an alternative purchasing outlet and introduce better competition into the tree crop export marketing chain.

In order to avoid the typical problems that arise with public sector marketing enterprises, GOSL intends to invite private participation in the shareholding of the company in due course. Other serious constraints relate to the lack of crop drying equipment and post-harvest storage, as a result of which Sierra Leone's tree crops have a mold problem and fetch the lowest prices in international markets. These problems could be addressed through investment in solar drying technology and improved farm centers and storage collection points.

## INTRA-REGIONAL TRADE: A PATTERN OF INFORMAL TRADE IN AGRICULTURAL PRODUCTS

Sierra Leone's engagement in cross-border trade also suffered severe contraction during the decade of conflict. While this is not revealed in statistical trade data, it is reflected in the devastation of regional markets that used to serve Sierra Leone, Guinea and Liberia. A particular example is the disruption of the trade which previously took place in a cluster of markets that connected Eastern Sierra Leone and Guinea with Western Liberia. As depicted in Figure 1.9 below, five regional markets were located in Koindu in the East of Sierra Leone, Guékédou in Eastern Guinea plus Foya, Kolahun and Voijama in Western Liberia. This market cluster previously conducted vibrant trade in agricultural produce and livestock, with a rotating schedule of days in the week during which each one with its dominant specialty would be open.

Concern by Guinea that conflict would spill into its territory led to the occupation of Yenga (near Koindu) within Sierra Leone's territory during the war, and the slow pace of withdrawal has put a damper not just on Koindu's activity, but has also inhibited revitalization of the cluster.

A resumption of trade has also been retarded due to the fact that road infrastructure providing access to these locations in Sierra Leone and Liberia was also badly affected during the war.

There are at least three other key markets which serve cross-border trade, notably Barmoi in Northern Province of Sierra Leone, Medina Dula located further North and situated in Guinea just across the border from Yama in Sierra Leone plus Bo Waterside in Southern Province servicing trade across the Mano River between Sierra Leone and Liberia.

The other barrier to the conduct of regional trade is the balkanization of currencies between WAMU countries. Once Sierra Leone and the other West African states working towards monetary harmonization (now scheduled for 2020) achieve a single currency, the "ECO", trade will undoubtedly be enabled by the enhanced convertibility of currency.

Through its membership in the West Africa Monetary Union, Sierra Leone stands to gain from monetary harmonization whereby adoption of a single currency will mitigate currency barriers to inter-regional trade, but this has been delayed to 2020 due to a lack of progress and seeming lack of urgency on the part of WAMU states.

Meanwhile, Sierra Leone's ***official*** engagement in intra-regional trade has been very low as depicted by data from the UN Comtrade database in Table 1.20.

Figure 1.9: Market Cluster Formerly Linking Guinea, Liberia and Sierra Leone.

This suggests that trade between Sierra Leone and ECOWAS plus the rest of Africa represents less than 10 % of total trade flows both for imports or exports. However, this is a recording problem and does not reflect reality on the ground. Official statistics indicate that Sierra Leone has imported from nine ECOWAS countries between 2005 and 2009 and exported to eight.

Ironically, zero imports or exports are recorded with Liberia which serves to reinforce the fact that the large majority of intra-regional trade occurs through informal channels across porous borders. The conclusion one must draw about Sierra Leone's intra-regional trade is that it is largely informal and is thus un-measured. Because of this, other sources must be consulted to reveal actual patterns of trade between Sierra Leone and neighboring states.

Food security surveys reveal that food crops produced for consumption are finding their way into cross-border trade in substantial volumes. Cross border trade in agricultural commodities and livestock is actually taking place at a brisk pace between Sierra Leone, Guinea and Liberia.

Guinea's agricultural products information system captures data on rice entering Guinea from Sierra Leone.[39] USAID's Famine Early Warning System, (FEWSNET) has observed that "urban demand emanating from Conakry, Freetown and Monrovia drives cross-border flows of local rice, gari, palm oil and groundnuts. Sierra Leone is an emerging gari, local rice and palm oil supplier for the Guinean market. Sierra Leone's monthly gari exports to Guinea exceed 1,000 tons." [40] FEWSNET maps depicting commodity flows of rice, gari (cassava) and palm oil on the following pages serve to illustrate that there is, in fact, a resurgence of trade flows both between MRU countries and beyond into the broader ECOWAS zone further north.

Figure 1.10 reflects that Kambia is an important rice-producing district in Sierra Leone and, when left without interference, Barmoi serves as a major brokerage market for trade in rice, through which a substantial tonnage is purchased and trucked to Conakry on a monthly basis. Guinea, like Sierra Leone, is a rice-deficit country, importing about 400,000 tons of rice from abroad in 2009. Yet, the urban middle class in Conakry have an apparent preference for local parboiled rice of the type produced in Sierra Leone.[41] Gari is a processed form of cassava which is a close substitute for rice. As the price of rice has risen, Sierra Leoneans have increasingly faced the choice of maximizing their food security and financial income by considering some of their rice to be surplus, selling that and consuming gari. In fact, since Sierra Leone produces gari well in excess of local consumption requirements the nation has become a major supplier to both Guinea and neighboring Liberia as presented in figure 1.11.

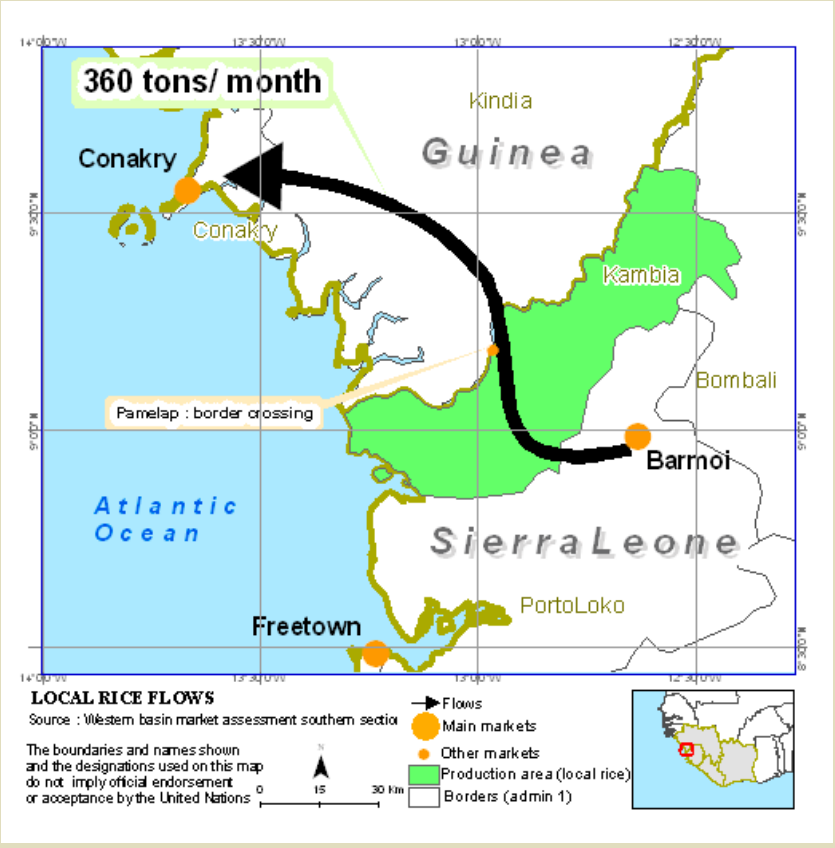
Figure 1.12 rounds out the inter-regional trade picture by demonstrating that strong demand

**Table 1.20: Sierra Leone Trade 2005 – 2009, Million US$.**

| | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|
| **Export to:** | | | | | |
| ECOWAS | 2,7 | 8,0 | 9,3 | 5,3 | 16,2 |
| Rest of Africa | 2,6 | 2,7 | 2,7 | 4,8 | 11,5 |
| The World | 228,4 | 289,6 | 399,1 | 344,2 | 296,3 |
| **TOTAL** | 233,7 | 300,3 | 411,1 | 354,3 | 324,0 |

Source: ADB Statistics Department using UN Comtrade Database.

**Figure 1.10: Cross-Border Trade flows of Rice from Sierra Leone to Guinea, 4th Quarter 2009**



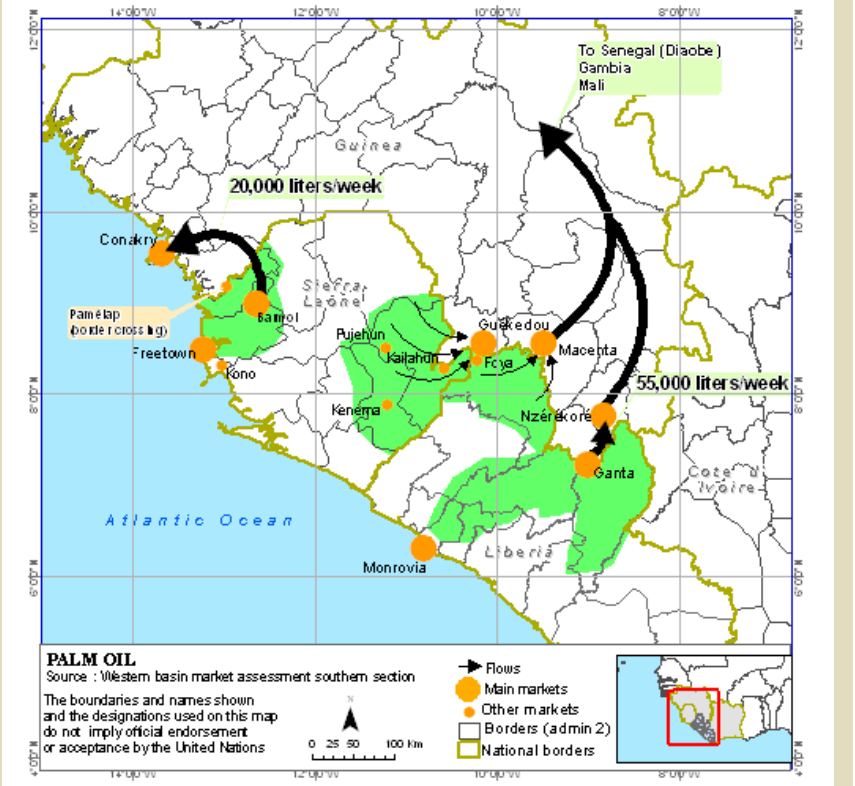

Source: FEWSNET, US AID

39 Système d'Information sur les Produits Agricoles en Guinéee (SIPAG).
40 "Tree Crops to Ensure Income Generation and sustainable Livelihoods in Liberia: Unlocking the Potential of the Cocoa Sub-Sector," Sustainable Tree Crops Program, IITA 2004, pages 52-55.
41 "The State of Food Security and Nutrition in Sierra Leone," Draft paper WFP, March 2011, page 24.

for palm oil in Senegal, Gambia and Mali serves to pull this commodity from Guinea, Liberia and Sierra Leone north-wards to Senegal where retail prices at Diaobe market are apparently twice those prevailing in Liberia. This occurs even while Sierra Leone palm oil simultaneously trades from Barmoi into Conakry. The price effects of trade serve to pull commodities to where they are in greatest demand, though because transport costs contribute a large component of the price of traded commodities, they tend to trade across the borders with greatest relative proximity.Taken together, these data suggest that commodity trade for key food crops is very much alive between Sierra Leone and its neighbors, but no effort is currently being made to track and report this in the official trade statistics. In some ways this reflects the fact that the nation has been preoccupied with nation building to achieve internal unity. Now that a decade of peace has been achieved, the pull of cross-border trade should get more attention Sierra Leone adheres to the ECOWAS trade liberalization scheme in terms of applying a common tariff among states in the economic community, but there are numerous constraints and impediments to further development of agricultural exports. There is a strong reluctance towards trade in food commodities deemed essential for food security with rice exports being the main trigger of sensitivity in this regard. A multitude of other factors also impede the production of tradable goods, including:

**Figure 1.11: Sierra Leone is a Major Supplier of Gari into both Guinea and Liberia.**


**Figure 1.12: Strong Demand pulls Palm Oil from Sierra Leone into Guinea and Beyond**




- Lack of adequate quality management systems to make products compliant with EU and other global market standards;
- Lack of trade finance;
- Differences in payment systems, making cross-border payments cumbersome;
- Availability of transport and trade facilitation services;
- Export packaging,
- Lack of trade information.

These are compounded by infrastructure constraints, particularly the poor state of roads and the lack of all-weather access. The lack of one-stop border posts that can scan and facilitate the movement of goods means that cross-border trade is informal and

therefore escapes official support or sanction. There is also a lack of adequate market structures to host and facilitate trade. Barriers to procedural harmonization reportedly include political factors, security concerns, language barriers, graft, differences in phytosanitary and other standards and diversity of administrative procedures. Harmonization and border crossing facilitation are key areas of inter-regional cooperation which would go a long way to yielding economic growth benefits to MRU states and beyond.

### Summary Constraints to Trade

| | Global Trade | Regional Trade |
|---|---|---|
| **General Constraints** | Lack of adequate quality management systems to make products compliant with EU and other global market standards; Lack of export packaging and poor | Lack of a common currency to facilitate trade. Differences in payment systems, making cross-border payments cumbersome and a lack of procedural harmonization and |
| **Infrastructure Constraints** | Poor state of roads and lack of all-weather access. Poor equipment for crop drying resulting in mold & quality problems. | Lack of common border facilities and hospitable, all-weather markets for trade. Inadequate road links to border locations & weigh stations & scanning equipment. |

### KEY FINDINGS AND CONCLUSIONS REGARDING SIERRA LEONE'S TRADE FLOWS/ PATTERNS

This analysis has identified that Sierra Leone has a dichotomous trade sector, exhibiting official sanction of formal trade flows with developed countries outside the continent but ambivalent, less-sanctioned engagement in informal trade flows within the region. Statistics are kept on the former but not on the latter. Concerns about food security cause officials to frown upon the export of locally produced rice and palm oil because the country has not yet achieved self-sufficiency in production volumes and must import rice in order to meet the balance of demand. It is recommended that GOSL reconsider this stance in light of their policy priority to encourage a shift from subsistence to commercial farming by the smallholder population. The trade balance has always been negative in favor of imports, reflecting that Sierra Leone has virtually no manufacturing industry with primary mineral and agricultural commodities as the basis of its exports. The diversity of export products was severely diminished due to the conflict but this trend is beginning to reverse in the minerals sector. Cocoa and coffee bean production is beginning to revive but exports are seriously impeded by a number of constraints including the poor state of roads which prevents access during the rainy season which coincides with the harvest. In addition, tree crop exports are seriously hampered by the lack of systems to produce, monitor and reward for quality gradations in output. Due to its rainy, humid climate, Sierra Leone suffers from mold problems caused by inadequate crop drying systems and this alone causes a huge opportunity loss in export value. Trade facilitation is highly inadequate regardless of the direction of trade and the country has a diminished capacity to support this area of economic activity as compared to the pre-conflict era. It seems evident that GOSL has focused priority attention in the post-conflict era to recovery of primary production for national consumption in the first instance with exports oriented to developed countries as a second tier priority. Stability, infrastructure and capacity conditions must all change in a favorable direction for regional trade to gain further momentum.

# 4. The Current Status of Infrastructure in Sierra Leone

It is increasingly recognized that an adequate stock of infrastructure is essential to support economic productivity and growth. As was identified earlier, African countries could expect a significant increase in economic growth if their infrastructure base was to catch up with the continent's leader.[42] This is most certainly true for Sierra Leone given the extremely low base and state of disrepair of the nation's stock of infrastructure. This section turns to identifying the contribution of infrastructure sectors to Sierra Leone's economy in their own right and then examines the current status of each key infrastructure sub-sector. It appraises the current stock or deficits in terms of quality, coverage and accessibility and, where possible, identifies the costs to consumers of infrastructure services, either in absolute terms or relative to more competitive benchmarks. As a continent, Africa lags behind all other continents with respect to their endowment in infrastructure. Therefore, following from the work of Calderon et al and in order to establish meaningful comparison between countries on the continent, the African Development Bank has established an Africa Infrastructure Development Index.[43] This ranks all countries in the continent against the African country with the best standard of

42 *The Effects of Infrastructure Development on Growth and Income Distribution, Cesar Calderon and Louis Serven, Central Bank of Chile, and Infrastructure and Growth in Africa,* Policy Research Working Paper 4914, The World Bank, Cesar Calderon, April 2009.

43 *The Africa Infrastructure Development Index, Economic Brief Vol. 1 No. 1,* African Development Bank, 25 April 2011

infrastructure development by using five proxy components with direct bearing on economic improvement to construct a comparison index. These include:

- Energy Development: Net electricity generation (KWh/per capita) creating electricity from various forms of energy.
- Telecommunications Development: total mobile and fixed-line telephone subscribers (% of total population);
- Road Development: Paved roads as a %age of all the country's roads measured in length, where paved includes surfaced with crushed stone (macadam) and hydrocarbon binder or bituminized agents, with concrete or with cobblestones;
- Social Infrastructure Development: Access to water (% of population) and
- Access to sanitation (% of population).

Table 1.21 situates the relative ranking of Sierra Leone on this index. It identifies the top three African countries, other MRU countries and the six countries that occupy the bottom rung. Unfortunately, Sierra Leone (together with Niger) has ranked consistently in the bottom rung from 2006 through 2009, bringing to light the country's urgent need across the board for an improvement in basic infrastructure. The good news, in a sense, relates to the boost in economic growth that Sierra Leone could expect to gain if it were to close its infrastructure gap. Calderon's study estimated that the average African nation could expect to achieve a 2.2 % annual gain in economic growth by catching up to the continent's leader, but the continent's laggard, Niger, could achieve a larger gain on the order of 3.5 %. Ranking close or behind Niger in recent years, one could expect Sierra Leone to also achieve more than average rates of gain from investment in infrastructure. GOSL is seized with the imperative of addressing the country's infrastructure deficits and a great deal of attention is being paid to the operating challenges, investment needs and policy gaps in each sub-sector. Policy and legislative frameworks are discussed in section 1.5 while this section examines current conditions in each sector.

Table 1.22 presents the current contrast which prevails between two spheres of Sierra Leone's baseline infrastructure, where one duo is thriving and the other is lagging far behind. Though grouped two by two, this data identifies that transport and communications sub-sectors have out-paced the growth of the economy over the past decade, rising to contribute almost 12 % of GDP. This has been accomplished by investment and expansion in both sub-sectors. Investment in transport has largely been government and donor funded while investment in communications has been driven by the private sector.

On the transport side, official development assistance has been assisting Sierra Leone with the construction of trunk and feeder roads and this is generating construction activity and encouraging greater business activity in the transport sector. In communications, liberalization of telephony has brought in four mobile operators licensed to conduct business in Sierra Leone and compete with the state-owned incumbent fixed line operator.

This degree of entry has significantly improved the contribution of communications to the economy as well as the national penetration rate in telephony services. The same is not yet true in the electricity and water sectors where investments have lagged behind and have only just begun to reach the completion point. The contrast between the economics of these two utility segments serves to reinforce the point that further investment in baseline infrastructure will begin to generate greater revenue and employment for Sierra Leone in the future.

Sierra Leone's depleted stock of infrastructure, both in terms of quality, accessibility and cost of service presents a major constraint to growth beyond the initial 'recovery plateau'. The country was beginning to suffer from the lack of infrastructure maintenance before the war, but significant further erosion took place during the decade of civil conflict through further neglect and outright

**Table 1.21: Sierra Leone's Position in the Africa Infrastructure Development Index**

| AIDI | Rank | Country | 2006 | Rank | Country | 2007 | Rank | Country | 2008 | Rank | Country | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Top Three | 1 | Seychelles | 100 | 1 | Seychelles | 100 | 1 | Seychelles | 100 | 1 | Seychelles | 100 |
| | 2 | Mauritius | 92,4 | 2 | Mauritius | 92,5 | 2 | Mauritius | 89,9 | 2 | Mauritius | 90,4 |
| | 3 | South Africa | 81,3 | 3 | South Africa | 82,3 | 3 | South Africa | 81,2 | 3 | South Africa | 81,8 |
| Bottom Six | 48 | Madagascar | 5,7 | 48 | Sierra Leone | 5,2 | 48 | Niger | 5,8 | 48 | Niger | 6,8 |
| | 49 | Sierra Leone | 3 | 49 | D. R. Congo | 3,9 | 49 | Sierra Leone | 5,1 | 49 | Chad | 5,1 |
| | 50 | Ethiopia | 2,4 | 50 | Niger | 3,3 | 50 | D.R. Congo | 4,9 | 50 | Sierra Leone | 4,9 |
| | 51 | Niger | 1,9 | 51 | Ethiopia | 1,5 | 51 | Chad | 2,4 | 51 | D.R. Congo | 4,9 |
| | 52 | Somalia | 0,3 | 52 | Chad | 0,8 | 52 | Ethiopia | 1,1 | 52 | Ethiopia | 4 |
| | 53 | Chad | - | 53 | Somalia | - | 53 | Somalia | - | 53 | Somalia | - |
| Other MRU Nations | 28 | Cote d'Ivoire | 22,3 | 25 | Cote d'Ivoire | 24,5 | 25 | Cote d'Ivoire | 25,7 | 28 | Cote d'Ivoire | 27 |
| | 32 | Guinea | 17,7 | 29 | Guinea | 21,8 | 28 | Guinea | 24,7 | 21 | Guinea | 29,7 |
| | 37 | Liberia | 13,8 | 42 | Liberia | 13,6 | 42 | Liberia | 12,6 | 43 | Liberia | 13,2 |

Source: The Africa Infrastructure Development Index, Economic Brief Volume 1 Issue 1, African Development Bank, 25 April 2011.

damage. The nation has some of the lowest penetration rates for provision of public utility services in Africa as well as some of the highest costs[44]. The scale of Sierra Leone's infrastructure deficit has been compounded by a staggering rate of urbanization revealed in Table 1.23 below reflecting that more than one third of the population now lives in urban centers.

Consequently, the country now faces a much more significant infrastructure challenge. While it is attempting to refurbish its aging networks, including electricity distribution and water supply systems, its old systems are currently called upon to service double or quadruple the load for which they were originally designed. Across the board, there is a need for repair and refurbishment.

Beyond that, there is a critical need to extend networks out into the rural hinterlands of Sierra Leone so as to redress the inequalities which originally caused internal conflict. With limited means, GOSL must nonetheless begin the process of servicing the entire population with energy, water, transport systems and ICT.

Improved distribution of utility and infrastructure services is recognized by government to be essential for the preservation of national unity and stability.

## OVERVIEW OF THE ELECTRICITY SECTOR

It is instructive to begin by situating Sierra Leone's power sector against regional and global benchmarks. At present, West Africa's per capita consumption of electricity is among the lowest in the world and, within ECOWAS, Sierra Leone figures toward the bottom.[45] This is depicted in Figure 1.13 which also shows the relationship between electricity consumption and a nation's ranking in terms of HDI. The implication is clear: investments in Sierra Leone's power sector will bring about an improvement in national welfare along both social and economic dimensions.

Sierra Leone's electricity sector performance indicators presented in Table 1.24 reflect the low state of development of Sierra Leone's power sector. Until the Bumbuna Hydro-Power station came on stream in 2010, generation relied upon mainly on costly fuel-based thermal generation.

In 1991, the country's installed generating capacity was about 120 MW of which 116 MW was from thermal plants and the balance was hydro generation. Only 76 MW was available from this capacity and the National Power Authority operated 33.4 MW in Western Area and 14.5 MW in isolated towns. About 28MW was the captive capacity of mining companies but much of the installed capacity from both public and private sectors has now run down or closed. NPA capacity declined to about 13 MW after the conflict and it has remained the vertically integrated state owned enterprise currently dominating the sector mainly serving customers in Western area with transmission and distribution lines operating on medium voltage and low voltage.The up-country towns of Bo and Kenema are served, with limitations, by a separate Bo-Kenema Power Station (BKPS) also managed by NPA. BKPS has a mixed hydro-thermal operation with installed thermal capacity of 5MW and a 6MW hydropower station at Dodo. It operates a 33kV sub-transmission line with 11 kV and low voltage local distribution.

The commissioning of Bumbuna I hydro-power plant in mid 2009 (financed by AfDB and Italian government) brought some improvement to the sector by increasing Sierra Leone's national generation capacity above 50 megawatts in the rainy season. Due to a decline in water flow, capacity drops to about 27MW at Bumbuna in the dry season but, until recently, this has been sufficient to cater to demand due to another constraint—a lack of downstream transmission and distribution facilities. Fortunately, AfDB financed two underground cable link interconnections with a capacity of 50 MW between Freetown substation, where BHP power is delivered, and the existing grid at the nearby Kingtom thermal power station(KTPP) in 2008 and 2010.

An 11 KW transmission line funded by JICA was completed in Freetown in 2009 and another 33 KW transmission line supported by World Bank was completed in April 2011. These new installations will make it more feasible for Sierra Leone to draw down the power which it is now capable of generating, but not until it undertakes more work to rehabilitate and repair the existing distribution grid. Physical investment

### Table 1.22: Infrastructure as a Contributor to Sierra Leone's Economic Growth

| Infrastructure Indicators | Share of 2003 Employment | Share of 2007 Employment | Share of 2001 GDP | Share of 2009 GDP |
|---|---|---|---|---|
| Electricity & Water | 0,10% | 0,80% | <1% | 0,4% |
| Transport & Communications | 0,60% | 1,60% | 7% | 11,8% |

Source: ADB Statistics Department using UN Comtrade Database.

### Table 1.23: Six Decades of Steady Urbanization in Sierra Leone

| | 1960 | 1970 | 1980 | 1990 | 2000 | 2010 |
|---|---|---|---|---|---|---|
| Urban Population | 392 123 | 624 207 | 948 914 | 1 343 472 | 1 501 003 | 2 099 400 |
| Total Population | 2 253 581 | 2 667 557 | 3 260 874 | 4 083 501 | 4 228 178 | 5 559 853 |
| Urban as % Total | 17,4% | 23,4% | 29,1% | 32,9% | 35,5% | 37,8% |

Source: African Development Indicators, World Bank

44 Data on infrastructure has not been deliberately collected by Sierra Leone Statistics in the past thus cost and performance data is scanty. Where direct data is unavailable, this study uses infrastructure cost data from other Sub-Saharan countries as a proxy. Just recently, a unit has been created to collect infrastructure within Statistics Sierra Leone.

45 *Energy and Power Study to Facilitate Interregional Trade and Exports in the ECOWAS Region.* Background Working Paper prepared for AFDB RISP, November 2010.

**Figure 1.13: Sierra Leone: Low in Electricity Consumption and HDI**

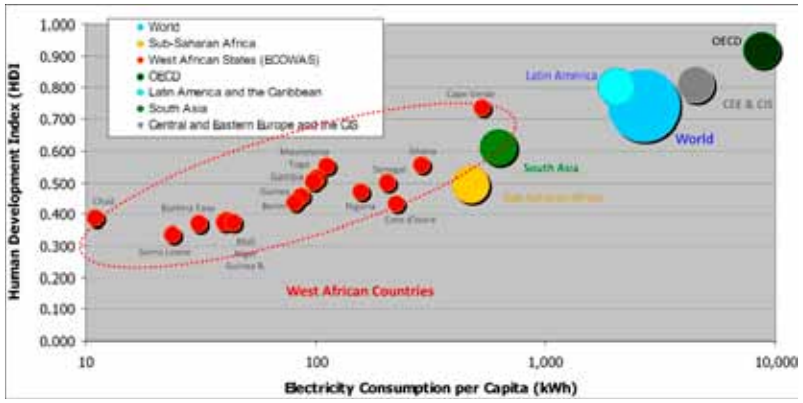



**Table 1.24: Sierra Leone Electricity Sector Performance Indicators**

| Power Sector Indicators | Year | Data |
|---|---|---|
| **Total Generation capacity** | 2010 | 63 MW |
| of which hydro production | 2010 | 77,2% |
| of which thermal production | | 22,8% |
| **Electrification ratio** | 2011 | <10% |
| **Electric power distributed/consumed** | | 17 MW |
| **National per capita electricity consumption kwh** | 2008 | 30,5 |
| **ECOWAS benchmark elec consumption per capita Kwh** | | 88 |
| **Western area per capital electricity consumption** | 2008 | 546 |
| **NPA Household customers, Freetown** | | 56 000 |
| **Price per KwH, Leones** | | 1 800 |

and operational improvements at NPA are currently striving to address these gaps. Development of transmission and distribution for Makeni-Magburaka and Lunsar-Port Loko is being planned under EU support and Government is securing support from the Peace Building Fund to improve operations of the Bo-Kenema Power Station to better serve the South and Eastern Regions. Until investment in distribution establishes a balance between generation and distribution within the national grid, the country will carry the capital cost of generation capacity that it cannot use and could not presently export.

A number of Sierra Leone's development partners have made it a priority to help the nation get the power sector back on track and Table 1.25 represents the current portfolio of projects underway. Outside of the Bumbuna Hydro-Electric generating station, the majority of these have been oriented towards urgent, stop-gap arrangements. Chapter three will present the longer term investments which are required to secure the country's needs for the future.

Outside of physical infrastructure deficits, the sector faces numerous challenges of an institutional nature which must be addressed in order to make further investment in the sector sustainable, efficient and economically beneficial. For instance, damage compounded by inadequate maintenance at NPA have saddled the enterprise with a 40.8 % technical loss rate, 18.9 % of which is due to system frailty and 21.9 % due to a persistent problem of electricity theft. These are being partially addressed through the introduction of meters and improvements in billing and collection.

Nonetheless, chronic under-investment, overstaffing, and a tariff structure that does not recover fluctuating fuel costs have essentially bankrupted the company, rendering it incapable of restoring or expanding the national grid through its own ability to raise resources. The company has had to cannibalize spare parts in one part of the Freetown to serve another, leaving the capital city without the supply that the minimal distribution network would ordinarily be able to supply.

Meanwhile, the lack of competition in the installation of a first generation operating contractor for Bumbuna kept operating costs of this facility higher than warranted. Earlier attempts to procure a more affordable management operator in Bumbuna were thwarted, reflecting troubling governance patterns in public sector oversight of the power sector. Development partner financing to procure an international competitive operator was turned down in favor of selecting an operator by GoSL through national procurement mechanisms. Nevertheless, attention to the problem has now been galvanized and a national procurement could equally help to redress the current situation and replace an expensive operator with one that is more affordable yet equally capable.

Coordination and sequencing of investment has also been less than optimal, reflecting similar problems related to "governance" of infrastructure. When the sector was at its lowest post-war performance, GOSL entered into a supplemental Take or Pay contract with Income Electrics, an Independent Power Producer (IPP), for 15 MW of thermal generation but since the transmission and distribution infrastructure could not absorb the supply, it led to a costly need to rescind a contract. Likewise, a sector Master Plan has been developed for Freetown, and while this is very helpful, there is also a need to think in terms of national grid. In particular, there is a need to develop tariffs that consider long term plans to extend service outside of Western Area.

Consequently, Sierra Leone's power sector tariffs have not yet been adjusted to take into account recent developments and set a path for healthy recovery in the sector.

## Table 1.25: Portfolio of Power Projects Recently Completed or Underway

| Project Title | Description | Planned Completion | Donor | Status | Est'd Cost (USD) |
|---|---|---|---|---|---|
| **Bumbuna Hydro-electric project supplementary loan** | Install 50MW hydro plant and 200km transmission line: Freetown, Makeni & Lunsar. Incl tariff study | | AFDB | ON-GOING | $16 588 667 |
| **Bumbuna Hydro-electric power** | Support to Bumbuna Phase 1 | 40148 | OPEC | COMPLETE | $5 000 000 |
| **Bumbuna Hydro Social and Environmental Mgm't** | Offset social and environmental impacts of Hydro plant | 41091 | WB | EXT'D | $12 764 902 |
| **Power and Water Project** | 50% of project devoted to power sector reform | 40603 | WB | ON-GOING | $37 103 198 |
| **Project for Urgent Improvement of Electricity Power Supply in Freetown Phase 1** | Construction new diesel power generators/ Kingtom | 39783 | JICA | COMPLETE | $4 871 795 |
| **Western Area Power Generation Phase 1** | Provision of electrical power | 40878 | BADEA | ON-GOING | $8 000 000 |
| **Western Area Power Generation Phase 2** | Provision of electrical power | 40422 | BADEA | EXT'D | $7 000 000 |
| **Emergency Support to Energy Sector** | Procure fuel, rehab of power plant in Freetown, Bo, Kenema. Capacity Dev't of NPA and BKPS | 40026 | UNDP, PBF | EXT'D | $10 500 000 |
| **Urgent Improvement of Power to Freetown Phase 2** | | 40238 | JICA | COMPLETE | $23 554 655 |
| **Master Plan Study on Power Supply in Western Area** | Formulate master plan of power supply in Western area for 15 yrs incl rehab, upgrade, expansion and a Tariff Study | 40148 | JICA | COMPLETE | $1 281 178 |
| **Enhancement Capacity for Power Maintenance** | Develop NPA capacity to maintain diesel generation, transmission, distribution facilities | 41609 | JICA | ON-GOING | $4 500 000 |
| **Restoration of Electricity in Provincial Towns** | Provision of generating capacity for some provincial towns | 41244 | EC | ON-GOING | $3 490 010 |
| **Improved Distribution in Goderich, Freetown** | Construct and rehabilitate in Goderich area | 40756 | JICA | ON-GOING | $650 000 |
| | | | | **TOTAL :** | **$135 304 405** |

Source: Development Cooperation Database, Sierra Leone Ministry of Finance.

Electricity tariffs ranging from 0.02 to 0.46 ¢ per KWh are high in Sub-Saharan Africa vis-à-vis 0.05 to 0.1¢ per KWh in other developing regions of the world, and Sierra Leone is no exception[46].

Table 1.26 identifies that tariffs in Sierra Leone appear to be the very highest or among the highest in West Africa, despite the fact that costs to consumers should be able to decline now that cheaper hydro-power generation is available through Bumbuna. NPA pays $0.15/KWh for power from Bumbuna Hydropower Plant but the long term marginal cost is estimated be much lower, on the order of about $0.02/Kwh. Thermal generation is estimated to cost between 30 and 40 ¢ per KWh and as long as the nation relies upon it, it will bring up the weighted cost of national electricity supply. These pricing problems reflect ubiquitous problems of poor governance and the vulnerability of Sierra Leone to "capture" by private interests through corruption or other means of persuasion. The current costs of Bumbuna I hydro-power and high and un-competitive with other hydro-generation sources and would make it unattractive for the private sector to enter into the distribution end of the sector until prices decline or NPA has been able to introduce improvements

## Table 1.26: Comparative Costs of Electricity in ECOWAS States

| Country | Avg Price US ¢ kwh* | Total Cost per unit, US / kwh** | Historical Cost Recovery Ratio % |
|---|---|---|---|
| **Benin** | 13,63 | 13,726 | 99,28 |
| **Burkina Faso** | 20,07 | 23,558 | 85,19 |
| **Cape Verde** | 22,81 | 23,342 | 97,73 |
| **Ghana** | 13,24 | 13,244 | 100 |
| **Niger** | 23,95 | 43,201 | 55,44 |
| **Nigeria** | 4,41 | 7,548 | 58,42 |
| **Senegal** | 14,23 | 23,871 | 59,6 |
| **Sierra Leone** | 42,00 | Tariff recovery low 39% due to losses | |
| **ECOWAS** | | | 79,38 |
| **Sierra Leone LRMC** | | 9.00 to 10.00 | |
| **WAPP, LRMC** | | 18,00 | |

Source : AICD, 2008.
* Sierra Leone price identified in National Energy Policy. For other countries, average Price derived by dividing Total Costs by Cost recovery ratio. Assumes that costs per unit include the cost of uncollected revenue.
** Includes historical capital and operational costs per unit.

46 Africa Infrastructure Country Diagnostic. *"Overhauling the Engine of Growth: Infrastructure in Africa"*, Vivien Foster, Sept. 2008, page 7.

such as pre-paid metering and stem technical losses and theft along power lines.

This discussion identifies the fact that Sierra Leone is in need of wholesale power sector reform which not only strives to secure investment which redresses the electricity infrastructure gap, but also tackles the root causes that have contributed to the poor performance of the sector. Meanwhile, government authorities estimate that demand for electricity will rise dramatically in Sierra Leone, and a more abundant supply is required, especially if the nation is to further develop the potential of mineral extraction and eventual industrialization.

## OVERVIEW OF THE ROAD TRANSPORT SECTOR

Sierra Leone has a modest stock of roads, similar to other MRU states, but below the African benchmark and the leading state in ECOWAS Table 1.27 and the accompanying Text-Box depict Sierra Leone's relative endowment in road infrastructure. At present, the national stock of roads includes a total of 11,555 kilometers, 1031 km of which are paved roads and the remainder unpaved. Roads fall into four categories, the first two of which are the responsibility of Sierra Leone Road Authority (SLRA) under the "core road network" (CRN):

1. Class A trunk roads, of which 905 km paved and 1407 unpaved; 2312 km total. Most are double bitumen surface treatment construction which is less than the asphalt-concrete standard desired by SLRA;
2. Secondary roads are 46 km paved and 2045 unpaved making 2091 total km;
3. 4152 km of Feeder roads;
4. Local and Township roads: 3000 km of which 80 paved and 2929 unpaved.

The pattern of unequal access to infrastructure identified in the discussion of fragility is reflected in the nation's stock of road infrastructure as revealed in Table 1.28. The poor state of rural roads and the lack of regular transport services present an impediment to personal travel and evacuation of agricultural products. This has been caused both by war and by a chronic lack of maintenance. Consequently, costs of passenger and freight transport are high. Urban transport is characterized by heavy traffic congestion and inadequate public transport. Most of the fleet consists of second hand vehicles and is below recommended safety standards. Public transport within the interior has traditionally been assured by Sierra Leone Roads Transport Corporation, a public enterprise bus company that is in the process of being privatized.

Excessive wear and tear inflicted on road infrastructure due to heavy axle loads is a concern. An axle load study has been undertaken but implementation measures to control excess loads are not yet in effect.[47] SLRA's investment plan identifies that it is concerned about the cost to transporters it plans to target a decrease in average vehicle operating costs and a reduction in travel times between key commercial centers.[48] Though Sierra Leone's transport costs have not been specifically studied and quantified, one can assume that the poor state of road repair presents a cost to vehicles both in terms of wear and tear and in terms of times needed to reach destinations. Meanwhile, overloading presents a high cost to road maintenance and it has been estimated that the road maintenance bill could be cut in half if overloading were enforced. Given the generally deteriorated state of the roads, one can estimate that transport costs in Sierra Leone might approximate the costs in other West African corridors and would be correspondingly higher than transport costs in more developed countries. Figure 1.14 presents data to support this assertion.[49]

Transport prices are not strictly correlated with prices however, and it has been identified that trucking cartels and limited competition have been a contributing factor behind high costs along West Africa's major trade corridors to landlocked countries. It is not clear to what extent this problem may be applicable in Sierra Leone.

Responsibility for feeder and local roads has been devolved to local district councils under the Local Government Act. A Road Fund has been established to collect fees and revenues from the licensing of vehicles and this is to be used by SLRA to fund maintenance of the core road network. The road fund is currently insufficient to assume the heavy expenditure requirements for maintenance of recently rehabilitated roads so the EC has provided $34.7 million for "Priority Infrastructure Works" to kick-start this fund and protect the heavy investment

### Table 1.27: Road Infrastructure in Sierra Leone and Comparison States

| Infrastructure | | Mano River Union Countries | | | | Comparisons & Benchmarks | | |
|---|---|---|---|---|---|---|---|---|
| **Source** | **1** | **Sierra Leone** | **Guinea** | **Liberia** | **Ivory Coast** | **Guinea-Bissau** | **Nigeria** | **Africa** |
| **Total Network (km)** | | 11555 | 44348 | 10600 | 80000 | 3455 | 193200 | |
| **% paved** | | 8,90% | 9,79% | 6,20% | 8,12% | 27,94% | 15% | 18,30% |
| **Density/arable land** | | 21,12 | 27,71 | 27,89 | | 11,51 | 5,85 | |

Source: African Development Indicators

### Table 1.28: Road Density by Administrative Area

| | |
|---|---|
| **Western** | 0.42 km/km$^2$ |
| **Southern** | 0.14 km/km$^2$ |
| **Eastern** | 0.12 km/km$^2$ |
| **Northern** | 0.09 km/km$^2$ |

Source: SLIEPA, GOSL.

47 AFDB has financed an axle load study as a pre-condition for financing of the Matotoka-Koidu-Sefadu road. European Union has held back from committing Regional Funds to finance the Southern Coastal highway link between Bandajuma and MRU Bridge to Liberia because it would like to first see Sierra Leone adopt the road common road axle load policy proposed by ECOWAS. The latter has been adopted by UEMOA countries, but not yet by WAMU.

48 This is expressed as an aspiration, but the baseline and quantified reduction targets are not specified.

49 Supee Teravaninthorn and Gaël Raballand, *Transport Prices and Costs in Africa: A Review of the Main International Corridors*, Working Paper # 14 of AICD Study.

recently made. Local authorities will need help from donors and the Ministry to identify revenue sources for the maintenance of roads under local jurisdiction.

The SLRA has galvanized assistance from development partners to invest heavily in both the rehabilitation of feeder roads and repair and extension of trunk roads in the core road network. Feeder roads are deemed essential for the revitalization of the agriculture sector while the latter are important to improve commerce and trade. A summary of recent road improvement projects is presented in Table 1.29 below and this portfolio of road projects will rehabilitate about 13% of the CRN.[50] This extensive inventory of road projects demonstrates the importance placed upon national integration and the strategic priority of joining the capital to the hinter-land. What it also reveals, more by omission, is that cross-border trunk routes were not the first priority to receive attention during economic recovery and this corresponds to the emphasis on revitalizing internal production before re-engaging in inter-regional trade. The exception is a Western leg of the Southern Coastal Highway that will run 76 km from Port Loko in Sierra Leone across the border and another 9 km into Guinea. It is being supported with regional EU grant funds and will include a common border crossing and a weigh-bridge capable of measuring axle load on Sierra Leone roads. In May 2011 President Koroma of Sierra Leone and President Conde of Guinea met in the District Office of Forecariah, Guinea, for the official opening of a new bridge connecting both countries and the laying of the foundation stone for the international road link. At this event the President stated, "This is a Mano River achievement…. we will succeed if we hold on together and build bridges…." The Eastern leg from Bandajuma to MRU Bridge and Liberia has been appraised but remains to date without a financing sponsor due to the desire by development partners for Sierra Leone to adopt axle-weight control measures.

From a regional integration perspective, completion of the Southern Coastal highway from Lagos to Dakar is a critical priority, but unless Sierra Leone can mobilize financing for the Bandajuma-MRU bridge link, there will remain a break in the chain. Sierra Leone has identified three other strategic road links that could begin to re-generate inter-regional trade with Guinea and Liberia but to date this has not been a priority.

**Box 1.6: Stock of Roads by Type**

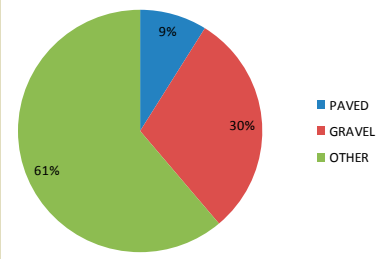
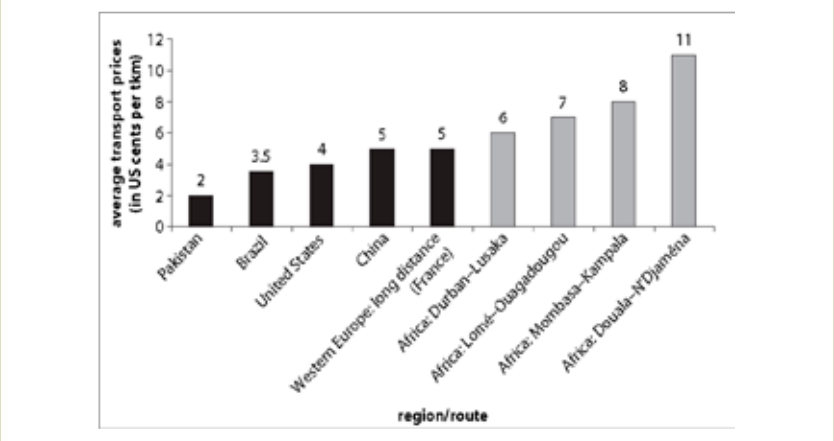



**Figure 1.14: Comparative Transport Costs—Africa / World**




## OVERVIEW OF THE AIR TRANSPORT SECTOR

Air travel represents an area of extreme inconvenience since Sierra Leone is poorly serviced by air carriers, especially for sub-regional connections. Airlines servicing the nation are few in number and connections are poor. Presently, an air travel passenger must fly East to Accra and then return West in order to reach Monrovia next door in Liberia. This pattern applies to the links throughout the coastal fringe therefore the first priority with respect to the air transport sector is to liberalize the reciprocity of landing rights in accord with the Yamoussoukro declaration of ECOWAS states.

A second aspect of air travel in Sierra Leone is the poor location of Freetown's Lungi airport, located 15 km from the city and across six km of water on a separate peninsula.Travelers are obliged to travel by helicopter (15 minutes) or water taxi (45 minutes) to reach Freetown after landing at Lungi. This added leg makes travel to Sierra Leone unappealing to tourists and investors whom Government is trying to attract. There is one airstrip at Lungi International Airport. The airstrip has a runaway length of 10,500 feet, sufficient for modern wide bodied aircraft to provide inter-continental service, but there is only one terminal building and poor facilities to handle air freight. A general waiting area was added to the Terminal building in 2008. Government would like to construct a new international airport, but in the interim, the country is receiving development partner support to resurface the runway, upgrade air traffic control communications equipment and other improvements

50 Road project data extracted from Sierra Leone's Development Cooperation database, available at http://dad.sinsys.com/dadsierraleone.

### Table 1.29: Summary of Current and Recently Completed Road Construction Projects

| CORE ROAD NETWORK | FINANCING BY: | KM | Status | Project Cost USD |
|---|---|---|---|---|
| Tokay-Lumley Road | Kuwait Fund | 21 | Extended | 27 750 000 |
| Hillside Bypass Road | BADEA/OPEC | 3,7 | On-Going | 17 040 000 |
| Road Infrastructure Programme | EC | | Completed | 68 127 515 |
| Freetown Conakry Road | EC | 86 | On-Going | 25 316 448 |
| Highway Phase 2 | EC | | On-Going | 29 926 680 |
| Rehab Feeder Roads 4 districts | EC | 650 | Completed | 12 337 662 |
| Matotoka Road Rehab Project | AfDB | | Completed | 9 200 000 |
| Priority Infrastructure Works | EC | Maintenance | On-Going | 34 656 589 |
| Kenema-Pendembu Road | BADEA/IDB/OPEC | 86 | On-Going | 61 560 000 |
| Lungi-Port Loko Road | AfDB | 62 | On-Going | 30 884 145 |
| Wilkinson Road Widening | GOSL | | On-Going | 14 026 549 |
| Road rehab Bok, Kenema, Makeni, Magburaka | GOSL | 21,7 | On-Going | 14 644 232 |
| Road rehab Kono, Kailahun, Kabala | GOSL | 30,98 | On-Going | 17 747 000 |
| Road rehab Western area Freetown | GOSL | 25,4 | On-Going | 7 721 036 |
| Feeder Roads Bombali, Tonkolili, Kailahun, Kono | AfDB | 555 | On-Going | 5 244 000 |
| Road rehab Port Loko, Kambia, Lunsar | GOSL | 13,28 | On-Going | 8 956 402 |
| | | **1555,06** | | **385 138 258** |

Source: DACO Database, MOF/SL.

that will improve the safety of existing airport infrastructure. There is presently no cold chain storage capacity at Lungi International making it impossible to support the private sector with initiatives requiring air freight of fresh produce towards external markets. Better infrastructure in a cold-storage chain at the airport and elsewhere is a significant constraint to the expanded export of fishery products.

## OVERVIEW OF THE PORT SECTOR

Sierra Leone presently has four ports, three under the authority of Sierra Leone Port Authority and one leased to African Minerals to service their iron mining operations. The deep-water port of Queen Elizabeth II in Freetown serves as the country's most important gateway for trade.

Though one of the finest natural harbors in the world, the port infrastructure was badly damaged during the civil conflict and the country has lost out on converting its natural advantage to competitive advantage in the competition for coastal or transshipment traffic from other ECOWAS ports like Lomé and Dakar. Nonetheless, Sierra Leone's development partners have helped SLPA to convert the QE container terminal into a "landlord port" and the National Commission for Privatisation (NCP) recently concluded negotiation of a concession contract to place it under private management. These measures aim to bring in investment in cranes and modern management of container and stevedoring operations to make the port more efficient and able to support a resumption of trade. Trade volumes through the port contracted during the war and demand for port services has only recently begun to rise, though current statistics on productivity and throughput are not available.[51]

Niti port located in Bonthe district is used exclusively for handling the export of rutile and Kissy Oil Terminal is devoted to petroleum products. Pepel port is currently leased to African Minerals, a private sector firm which recently discovered a large deposit of iron ore in Tonkolili District. Under terms of their lease, African Minerals must make the port available to use by other mining companies as this river port has the advantage of enabling Panamax size vessels to dock. The port reform process envisages issuing licenses for bulk and break-bulk handling while Sierra Leone Port Authority will assume responsibility for port administration and marine services. In the future, added infrastructure may be needed to better cater to the minerals sector as it develops, with special attention needed for the handling of petroleum resources.

### Table 1.30: Port and Export Operations in Sierra Leone and Comparison States

| Port & Export Operations | | Fragile Fringe Countries | | | |
|---|---|---|---|---|---|
| | | Sierra Leone | Guinea | Liberia | Guinea-Bissau |
| Cost to Export US$ per Container | 2009 | 1 448 | 820 | N/A | 1 545 |
| Time for export (days) | 2009 | 29 | 33 | 20 | 25 |

Source: African Development Indicators, World Bank

51 TEU throughput, dwell time, ship turnaround time, crane moves per hour and other statistics will become available for container traffic once the management concessionaire has been in operation for a while.

## OVERVIEW OF RIVER TRANSPORT SECTOR

Sierra Leone has 800 km of waterways, of which 600 km are navigable all year round. If properly developed, river transport could offer a lower cost alternative to road transport of bulk commodities to Freetown and other locations along the coast. Use of river transport is essential to gain access to the major rice producing areas of the country but the Scairces and Torma Bum Waterways are silted and there is a lack appropriate motorized craft available to ply them. Sierra Leone's river network could offer the potential of providing bulk transport for export commodities to Freetown at costs than would be available via road transport, though precise statistics have not yet been developed for this sub-sector. Investment is needed for the construction of jetties to support transportation on inland waterways and also for the dredging of rivers at specific locations.

## OVERVIEW OF THE RAIL SECTOR

During the colonial era, Sierra Leone had a rail line which extended from Queen Elizabeth II Port up to Pendembu in the East. As this fell into disrepair, it was disassembled and rail gauge was shipped back to the UK but this is a decision that has been regretted ever since and the right of way still exists to be able to reconstruct the line. At present, the country only has the Freetown-Marampa line leading from a mine in Northern Province to Pepel port, both of which are privately operated by African Minerals to cater to their mineral exports. Under terms of their mining lease, African Minerals is required by the Ministry of Mineral Resources to re-build the rail line with 3.6 gauge tracks and also 4.8 international standard gauge so it will permit other paying customers for the right to concurrent cargo use. Figure 1.15 identifies the present stock of rail infrastructure in West Africa, including prospective plans considered by ECOWAS and NEPAD. This reveals that there are currently no formal plans under sponsorship of regional bodies to develop rail infrastructure that would penetrate Sierra Leone's interior.

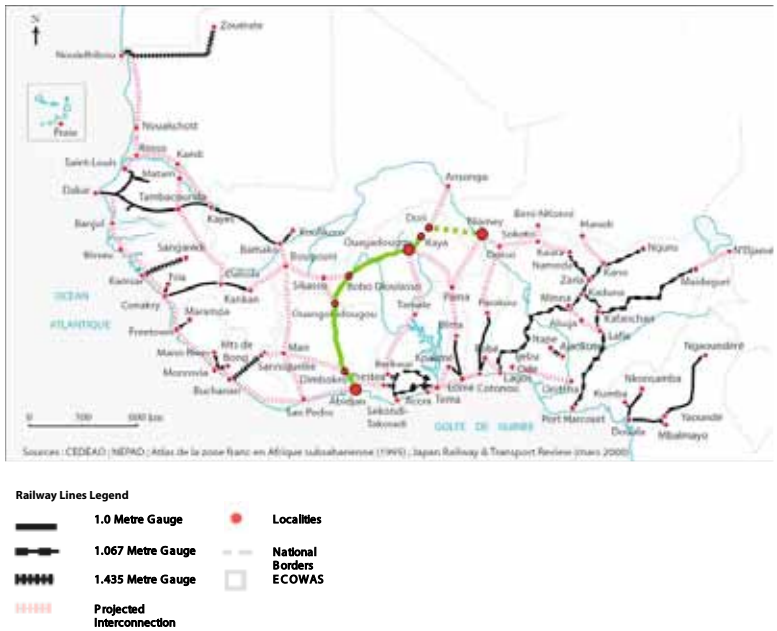
Looking into the future, Sierra Leone believes that rail transport for shipment of mineral cargo would be highly valuable and would like to be considered as an interested participant under ECOWAS regional planning scenarios that contemplate the refurbishment and extension of rail services in the region.

**Box 1.7: Queen Elizabeth II Port Facility**


## OVERVIEW OF THE ICT SECTOR

The ICT sector is enjoying vibrant growth within the Sierra Leone economy and it holds a great deal of promise for the near term. Sierra Leone liberalized its telecommunications sector over the past decade, licensing four mobile operators who compete with the national fixed line operator Sierra Tel under a regulatory framework administered by the National Communications Commission (NATCOM). Sierra Tel is the only operator of fixed line service and it has suffered from the entry of competitors. However, with

**Figure 1.15: Schematic of ECOWAS Rail Lines, Planned and Prospective[52]**




52 Originally compiled by CEDEAO, NEPAD, Japan Railway and Transport Review. Extracted from Transport Corridors to Facilitate Interregional Trade and Exports in the ECOWAS Region, AFDB Background Paper for RISP.

support from China's ExIm bank, Sierra Tel has been able to invest and enter the mobile telephony business. They are providing services to the rural population up country. The combined mobile subscriber base had reached 2,254,925 by the end of 2010, representing 38% of Sierra Leone's population.[53] Table 1.31 identifies how quickly the mobile subscriber base was able to evolve after liberalization of the sector brought about new entry and reduced tariffs due to competition. Revenue generated by the telephony market was estimated at $172 million in 2008 and demand in the voice market has been growing at double digit rates.

In fact, the current dynamics in the market are that prices are highly competitive if a subscriber makes calls "in network" but not for calls between networks, so competition works on the basis of distinctions in offered service quality and specialized programs. Consequently, many mobile users acquire SIM cards for use on multiple networks so it is probably not the case that one in three Sierra Leoneans has a mobile phone. A smaller number have multiple phones or SIM cards. Competition is sufficient to replace the need for regulated tariffs, though companies are required to justify price hikes before implementing them. The system of pre-paid phone credit currently works to the advantage of companies from a cash flow point of view and to the advantage of clients for securing lowest possible cost of service. Business people nonetheless lament that the cost of cross-border calls is so expensive even though the same mobile companies may operate in neighboring countries. The aspiration is for inter-regional connectivity to develop further in the future, integrating ECOWAS into a single, unified telecommunications market. To place Sierra Leone's performance in context, Table 1.32 presents the sector performance as against other ECOWAS countries. This shows that Sierra Leone is doing fairly well with respect to telephony, but is behind in terms of cost of internet and number of customers served.

At present, Sierra Leone does not have a landing station for fiber optic cable and it missed out during its conflict period on gaining access when SAT 3 was installed connecting Ivory Coast, Ghana, Benin and Nigeria with Central and South African countries. This has put it far behind other ECOWAS countries with respect to accessibility and cost of internet service. Consequently, internet penetration is very limited, estimated at below 3%. Though usage has grown at a 15% annual rate in recent years, it relies upon satellite telephony so is still very costly and beyond the affordable reach of most of the population. There are over ten licensed broadband internet service providers accompanied by flourishing expansion of internet cafes which is how most Sierra Leoneans currently gain access. Dramatic declines in the cost of internet services will only become feasible when Sierra Leone is able to pursue investment in a submarine cable and landing station linking it with Europe. Plans are underway for this purpose and details will be presented in Chapter Two.

## OVERVIEW OF THE WATER SECTOR

Despite Sierra Leone's favorable climate and high levels of rainfall, harnessing water resources has presented the nation with a serious challenge, making access to basic water and sanitation facilities extremely limited for the majority of Sierra Leoneans. Water supply to Freetown is provided by Guma Valley Water Company, drawing mainly from the Guma Dam and supplemented by ground water resources. Supply to six urban areas in the provinces is provided by Sierra Leone Water Company (SALWACO) and, through the process of devolution to local authorities, they are beginning to get involved in rural water supply projects. Nonetheless, it is estimated

### Table 1.31: Rapid Evolution of Mobile Telephony in Sierra Leone

| Year | Subscriber base | Growth Rate | Mobile Tele-density | Mobile Penetration Rate | Average Revenue per User (ARPU) |
|---|---|---|---|---|---|
| **2007** | 1 200 000 | 72% | 10% | 18% | $14,00 |
| **2008** | 1 545 000 | 39% | 18% | 31% | $8,00 |
| **2009** | 1 704 965 | 10% | 25% | 35% | $6,50 |
| **2010** | 2 254 925 | 24% | 31% | 38% | $7,00 |

Source: Sierra Leone Ministry of Information and Communications

### Table 1.32: ICT Infrastructure in Sierra Leone and Comparison States

| ICT Infrastructure | | Mano River Union Countries | | | | Comparisons & Benchmarks | | |
|---|---|---|---|---|---|---|---|---|
| **Source** | **Yr** | **Sierra Leone** | **Guinea** | **Liberia** | **Ivory Coast** | **Guinea-Bissau** | **Nigeria** | **Africa** |
| Main Line density | | 0,52 | 0,52 | 5,65 | 1,73 | 0,29 | 0,86 | 2,83 |
| Mobile density | | 31,0 | 26,4 | 19,3 | 50,7 | 31,8 | 41,6 | 35,5 |
| Internet Users | 2008 | 16 000 | 90 000 | N/A | 660 000 | 37 100 | 11 000 000 | 60 901 474 |
| Internet Penetration (density) | | 0,27% | | | | | | |
| Price basket for internet (US$/mo) | 2006 | $700,00 | $17,78 | N/A | $67,71 | $74,95 | $50,29 | $39,20 |
| Telecoms investment w/PPI | | 26 300 000 | 18 000 000 | 17 000 000 | | 39 500 000 | | |

Source: African Development Indicators data uses most recent data available for each country. Sierra Leone data comes from MOIC.

53 National ICT Policy of Sierra Leone, Ministry of Communication and Information, Republic of Sierra Leone, May 2009

that two thirds of the rural population have no access to safe drinking water. While the water supply coverage rates in Table 1.34 show stark differences in improved water and sanitation services to rural versus urban populations, Table 1.35 reveals that progress is slowly being made to deliver service up country.

The lack of safe water supply means that people have developed unhealthy and burdensome coping mechanisms, such as fetching water from unprotected surface water and wells which is not treated. There is consequently a high presence of E-coli, fecal coli and other pathogens unfit for human consumption. An estimated 11 % of the population has access to septic tanks while 76 % use pit latrines. Untreated sewage is discharged into the ocean leading to coastal pollution.[54] It is clear that broader gains in quality of water and sanitation services will decrease morbidity and exert a beneficial impact on HDI indicators. Both the World Bank and AfDB have made water supply and sanitation a priority within their programs, and they plan to help the GOSL implement a new sector strategy. The Three Towns Water Supply and Sanitation Project will improve access to drinking water for up-country urban populations while the Rural Water Supply and Sanitation Project planned for 2011 is due to improve access to water supply and sanitation services for the rural population. The country's natural endowment in rainfall is distributed unevenly on a seasonal and geographic basis, but the nation nonetheless has the potential to provide for domestic, industrial and irrigation uses. Supply into Freetown is vulnerable to climate change as fluctuations in rainfall have demonstrated the need for rationing from Guma reservoir. Figure 1.16 prepared by FAO Aquastat depicts Sierra Leone's natural endowment in water resources, demonstrating that, with investment, the current situation of poor access could be reversed. The Ministry of Agriculture has determined that it can triple the average yield of rice if it is undertaken under irrigated conditions instead of rain-fed conditions and, as a consequence, MAFFS is strongly encouraging the private sector to invest in irrigation infrastructure to take advantage of this potential. To date there has been a disappointing rate of private investment in irrigation so the Ministry seeks support from development partners to develop some irrigation schemes on a demonstration basis to display the greater potential to the private sector.

## KEY FINDINGS REGARDING THE STATE OF INFRASTRUCTURE IN SIERRA LEONE TODAY

Africa sits at the bottom in the global rank of infrastructure by continent and Sierra Leone is in the bottom tier therein. Recognizing that the nation is severely impacted by deficits in both the quantity and quality of infrastructure, Government is very much seized with the need to redress this situation and is making infrastructure recovery a priority focus of domestic management. Whereas the civil conflict caused major damage to national infrastructure, it is also clear that a chronic lack of maintenance in roads, power and water has contributed to a material degree in the deterioration of the national stock of infrastructure. For this reason it is essential that future infrastructure investment programs be accompanied by maintenance programs and domestic financing schemes that can ensure long term sustainability. This observation reflects a related problem, that of poor governance in the infrastructure sector. In general, it is noted that infrastructure spending is vulnerable to corrupt practices and Sierra Leone is not exempt from this situation. Sustained efforts are needed to improve public capacity in maintaining and governing the infrastructure sector accompanied by measures to improve public sector administration.

The power sector benefited favorably from completion of Bumbuna I hydro-power generation plant in 2010, but the electrification ratio remains below

**Table 1.33: Pricing Structure for Fixed Wireless Application Services in Sierra Leone.**

| Fixed Wireless Application Services | Dedicated | | Premium | | Basic | |
|---|---|---|---|---|---|---|
| Service Class | 512K | 1MB | 512K | 1MB | 512K | 1MB |
| Price (Monthly subscription) | $2 200 | $4 300 | $1 250 | $2 400 | $700 | $1 350 |
| Min Total Throughput | 512K | 1MB | 256K | 512K | 128K | 256K |
| Max Total Throughput | 512K | 1MB | 512K | 1MB | 512K | 1MB |
| Max Upload | 384K | 768K | 256K | 512K | 192K | 384K |
| Min Upload | 256K | 512K | 128K | 256K | 64K | 128K |

Source: Sierra Leone Ministry of Information and Communications.

**Table 1.34: Water and Sanitation Infrastructure in Sierra Leone and Comparison States.**

| Infrastructure | | Mano River Union Countries | | | | Comparisons & Benchmarks | | |
|---|---|---|---|---|---|---|---|---|
| Source | Yr | Sierra Leone | Guinea | Liberia | Ivory Coast | Guinea-Bissau | Nigeria | Africa |
| **Water & Sanitation** | | | | | | | | |
| % pop w/Access improved sanitation | 2006 | 11,0% | 19,0% | 32,0% | 24,0% | 33,0% | 30,0% | 38,4% |
| % Rural Pop w/improved water | 2006 | 32,0% | 59,0% | N/A | 66,0% | 47,0% | 30,0% | 50,9% |
| % Urban Pop w/improved water | 2006 | 83,0% | 91,0% | 72,0% | 98,0% | 82,0% | 65,0% | |

Source: African Development Indicators data uses most recent data available for each country.

54 Mid-Term Review of the 2005-2009 Results Based Country Strategy Paper and Request for Access to the Fragile States Facility, ORWB AfDB, Nov. 2008.

### Table 1.35: Access to Improved Water Services is Showing Progress.

| % Households w/Access to Safe Drinking Water | Year | | | | |
|---|---|---|---|---|---|
| | 2005 | 2006 | 2007 | 2008 | 2009 |
| Bo | 8% | 9,50% | 12% | 13% | 15 - 20% |
| Kenema | 20% | 25% | 28% | 33% | 35 - 40% |
| Makeni | 13% | 16,50% | 25% | 30% | 25 - 30% |
| Lungi | 4% | 6% | 7% | 8% | 10 - 15% |
| Kono | - | - | - | - | 0% |
| Kabala | - | - | - | - | 0% |

Source: WaterYearSource: PRSP II Progress Report.

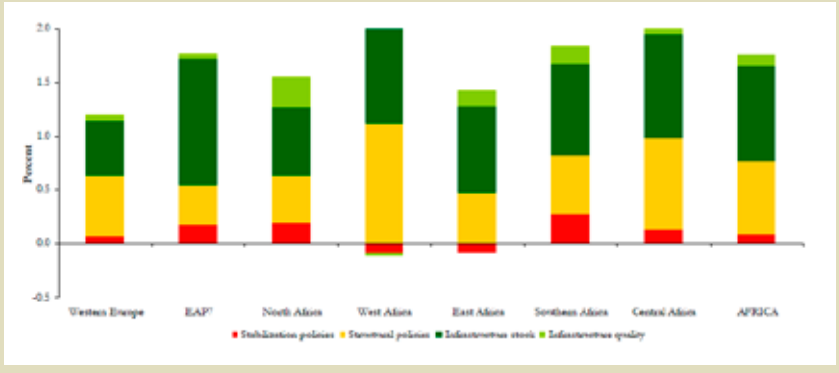
### Figure 1.16: Sierra Leone Water Resources Profile


10% and is mostly concentrated in the Freetown metropolitan area. Emphasis to date has been placed upon restoring generation, transmission and distribution facilities destroyed during the war and the country has not yet been able to devote attention to expanding the national grid. Despite recent investment to improve generation and distribution, Sierra Leone's power supply is still not sufficient to meet the greater demands that the mining industry will require in the future. In addition, it is not geographically distributed to locations that would support agro-industry and release greater productivity from the agricultural sector. Sierra Leone requires both an expansion of supply and an improvement in the geographic distribution of power in order to stimulate greater economic growth. The potential to address both of these weaknesses could be improved through Sierra Leone's participation in the West African power pool.

A similar situation exists with the roads sector whereby essentially all of the nation's 11,555 km in the "core road network" require refurbishment, spot re-graveling or other forms of repair. Significant attention is especially needed to the feeder road network in the interior as this provides access to the key agricultural producing centers in the country and will contribute to poverty alleviation by improving farmer access to markets. Improved trunk roads are also needed to allow for an increase in cross-border trade and to enable the transport of minerals to ports or eventual transformation sites. The cumulative lack of resources devoted to road maintenance has undoubtedly exacerbated the physical condition of Sierra Leone's roads and new measures to reform the Road Fund are designed to address that problem in the future.

Improved water supply is only available to about a third of the rural population and urban water supply systems are also wrought by numerous problems and deteriorating infrastructure. Expanded investment in irrigation systems would enable Sierra Leone to tap its comparative advantage in rice production and become a major exporter and supplier into the ECOWAS region. Two sectors have benefited from private sector entry and investment, notably telecommunications and port operations. The former occurred as a result of sector liberalization and the licensing of four mobile operators as a result of which teledensity is up over 30 %. A private company has been brought in to manage Sierra Leone's

### Figure 1.17: Changes in Per Capita Growth Due to Changes in Growth Fundamentals 2001-5 vs. 1991-95



container terminal at its main trading port through a competitively tendered international concession. Domestic and regional infrastructure solutions both feature within Sierra Leone's current efforts to address its infrastructure gap but sequencing has tended to prioritize an emphasis on national scale projects in the first instance. Nonetheless, there are projects of a regional nature currently in planning phases for power, ICT and roads sectors, all of which will be described in greater detail in Chapter Three. There is support for inter-regional infrastructure though the concern is also expressed that over-reliance thereon without national redundancy in systems that can deliver services would present a risk that the country cannot afford.

# 5. National and regional policy, strategic, legal and regulatory frameworks

This section reviews Sierra Leone's policy, strategic, legal and regulatory frameworks (in the following referred to shortly as "policy frameworks") to foster national stability, reduce poverty and proceed from economic recovery to new stages of growth. It also looks at the country's engagement at a regional level, both as a member of the Mano River Union and as a member of ECOWAS. The section begins with an examination of the Agenda for Change which constitutes Sierra Leone's second Poverty Reduction Strategy (PRSP). It then takes a closer look at relevant sector policy frameworks pertaining to infrastructure, agriculture, natural resources and trade, appraising each of these with regard to their stage of evolution as well as their national and regional dimensions. It also looks at complementary policies that help to create an attractive business climate, notably those pertaining to private sector development, and to strengthen the capacity of the country's public sector/administration. Infrastructure development studies cited earlier in this report have identified the plausible extent to which investment in the quantity and quality of infrastructure can supply a boost to economic growth.[55] At the same time, it is also critically important that sector policies and structural reforms accompany such investment as this will enable infrastructure to yield its full economic potential. In particular, when comparing how infrastructure in Africa contributed to growth between two different time-periods, structural policy variables were shown to systematically contribute alongside infrastructure investment to observed levels of growth. In the case of West Africa, structural policies affecting human capital, trade openness, financial depth and governance were actually even more important. Consequently, it is important to take stock of GOSL policies when considering infrastructure investment planning for the future.

## THE AGENDA FOR CHANGE: SIERRA LEONE'S STRATEGY FOR POVERTY REDUCTION

Bearing in mind the lessons from its past and eager to recover from the ravages of war, Sierra Leone developed its first full poverty reduction strategy for the period 2005 – 2007 around three pillars: governance and security, food security and job creation, growth and human development. The second PRSP was entitled *Agenda for Change* [56] reflecting the over-riding ambition to speed up progress towards achievement of Millennium Development Goals against which the country was lagging behind. Covering the period 2008-2012, PRSP 2 asserts the importance of transformational economic growth as the principal means by which poverty will be reduced. The Agenda for Change is much more than poverty reduction strategy; it is more of a manifesto for social, economic and legislative renewal. It came into being with the new Administration on the recognition that the country had entered the new millennium with policies, legislation, institutions and strategies suited to the previous century. There was a need for a vision that would set the national orientation towards developmental growth and help to fill a void. It therefore includes content that identifies what policies need to be developed, what legislation and institutions need to change and why and what strategies should be brought to bear to lead the way for profound and lasting change. This strategy (see PRSP Text-Box) identifies four key "Strategic Priorities" of which two pertain to the upgrading of electricity and transportation sectors, plus four "Enablers of Growth" the re-orientation of which was deemed essential to support the holistic poverty reduction effort. This document has become the guiding vision against which sector policies and plans have been developed and investment priorities are still being established for the country. To aid in resource mobilization, the PRSP includes an activity matrix with an estimate of poverty reduction costs, resources available and the financing gap for which partner assistance is desired. A mid-term progress report was issued in June 2010.[57] One shortcoming of PRSP 2 is that some areas identified for investment, such as river transport, port and jetty plus rail infrastructure are not costed and included in the public investment plan. Unfortunately, this gap was not correct with the mid-term report and there is no

55 Cesar Calderon, *Infrastructure and Growth in Africa*, Ibid, Pages 12 and 32.
56 An Agenda for Change: Second Poverty Reduction Strategy (PRSP II) 2008-2012, Republic of Sierra Leone.
57 Joint Progress Report on the Agenda for Change, January 2009 - June 2010: Stability- Opportunity-Growth It's Time, 9 September 2010.

comparison data on commitments or expenditure incurred to date against that prescribed in the plan.

The new strategy is situated against a sober recognition that investment in Sierra Leone has so far failed to deliver an adequate rate of growth and, as a consequence, job creation is not fast enough (especially given substantial youth unemployment and the risk this poses) and government revenues are not high enough to meet all needs. Consequently, the strategy seeks to strictly prioritize focus on those few key actions which require government (rather than private) action while concurrently engineering a change in the investment climate to enable the private sector to play a greater role in generating growth. The growth strategy therefore aims principally to:

1. Close the infrastructure gap

2. Enable private sector development to gain returns from productive sectors

3. Manage natural resource wealth so that it benefits the nation, and

4. Sustain growth through measures that maintain social service delivery and stability.

Sierra Leone's poverty reduction strategy is not designed to pick winning sectors or push growth in a specific direction. It is intended to create baseline conditions against which natural winners can emerge. This is reinforced by strong emphasis of clarity on the respective roles of the public and the private sectors. As a former businessman, President Koroma and his cabinet ministers (many of whom have also been drawn from the private sector into government), share a strong conviction in the important but distinct role of each. The strategic priorities place emphasis on the measures that the public sector must lead in order to create conditions hospitable for private sector participation (PSP) in economic activity. Thus, for example, an improvement by the public sector in the delivery of basic education, health, food security and security services is deemed essential for improving Sierra Leone's human development and human resource capital available to participate in private-sector led growth. Agriculture, transport and energy sectors are each identified as requiring public sector leadership to drive a process of structural and attitudinal reform, introducing commercial orientation and paving the way for further private sector investment. Though not stated as such, the orientation suggests a preference for private sector investment in the first instance and public sector investment where there is a need to create baseline conditions, absorb risks of entry or where private investment is slow to materialize. The enabling pillars likewise seek to reinforce the development of an attractive investment climate, one where government strives not to crowd out the private sector and where private investment is welcomed in infrastructure as well as agriculture, industry and other economic sectors.

Taking their cue from PRSP 2, national policy, legislative and strategy frameworks have been progressively tackled in key areas of the economy. These began with priority focus upon enabling measures (macroeconomic policy, governance and private sector development) while simultaneously addressing the agriculture, road transport and electricity sectors in particular.

These represent the spheres most advanced in terms of national governance frameworks, except for ICT which has also moved quickly ahead. Work has been also been undertaken on water and sanitation, transport and trade sectors though the latter two are still at the stage of policy finalization. The sections below provide a sequential review of this landscape. It begins with a review of macroeconomic policies and the framework for private sector development. It then examines agriculture and natural resource policy frameworks, moves through the infrastructure sectors and finishes with a look at trade.

## NATIONAL MACROECONOMIC AND OTHER GOVERNANCE POLICIES

Sierra Leone's macroeconomic policy expresses a commitment to stability in order to promote broad-based growth. The main fiscal policy objective in the medium term has been to balance revenue and expenditure within a framework of realism, thereby achieving sustainability and avoiding debt financing of the budget. On the expenditure side, GOSL policy favors stepping up public investment in infrastructure and measures that will reduce poverty, while maintaining prudent expenditure controls overall. On the revenue side, policy favors efforts to expand the tax base and improve the efficiency of revenue collection. Public financial management policy aims to support strategic, efficient and effective allocation of resources, value for money and probity in the use of public funds. An Integrated Financial Management Information System has been implemented for this purpose and legislation has been updated to support these policy measures through passage of the Government Budgeting and Accountability Act, the National Public Procurement Act and accompanying regulations. Debt management policy has pursued a reduction in debt through HIPC relief and Government is formulating a post-HIPC Borrowing and Debt Management Act aimed at containing central and local government and parastatal borrowing to sustainable levels that avoid risk of debt distress. Government policy is to encourage grant financing and concessional borrowing while also discouraging government units and parastatals from taking on large financial

**Sierra Leone's Poverty Reduction Strategy 2008-2012 "An Agenda for Change"**

| Strategic Priorities | Enablers of Growth |
|---|---|
| Enhancing National Electricity | Good Governance |
| Developing National Transportation | Growing the Private Sector |
| Enhancing Ag and Fishery Productivity | Sustaining Financial Sector |
| Promoting Human Development | Effective Natural Resource Mgm't |

**Box 1.8: Legislation Passed Since the Civil War**

- Government Budget and Financial Accountability Act
- Public Procurement Act of 2004
- Local Government Act of 2004
- Anti-Corruption Act of 2008
- Companies Act of 2009
- Bankruptcy Act of 2009
- Mines and Minerals Act of 2009
- International Youth Commission Act 2009
- Chieftancy Act of 2010
- Phytosanitary and Pest Control Act of 2010

obligations or contingent liabilities outside the national budget through the enactment of this public debt legislation. Monetary policy will be conducted using indirect instruments monetary operations, mainly Open Market Operations, and will aim to attain a single digit rate of inflation. GOSL remains committed to a freely floating currency and a liberal trade regime that adheres to the Common External Tariff under the ECOWAS Trade Liberalization scheme. The Central Bank will seek to maintain foreign exchange reserves to provide 3.5 months of import cover and will increase exchange rate flexibility to allow for appropriate exchange rate responses to external shocks. These efforts to maintain exchange rate stability are to be accompanied by measures that encourage export development and diversification.

Two other key policy dimensions of governance relate to decentralization of authority and measures aimed at stamping out corruption. With regard to the first, a Local Governance and Decentralization Reform Program was launched in 2004 with local council elections which ushered in the first democratically elected local councils in Sierra Leone since 1972. The Local Government Act provides the supporting legal and regulatory framework, the principal objective of which is to enhance service delivery and support development in Sierra Leone. The initiative strives to open up democratic processes and strive for greater inclusion of Sierra Leone's population in national governance, support citizens' ownership of decentralization and foster transparency and demand side accountability in service delivery. Public sector corruption is an area of significant concern and leadership is placing a premium on transparency as evidenced by the public disclosure of national accounts, the placing of development assistance and statistics databases in the public domain, the public disclosure of assets by civil servants and the promulgation of a Freedom of Information Act which is now before Parliament. At the same time, anecdotal evidence suggests that the country remains vulnerable to corruption in the minerals sector and also in the infrastructure sector and it is quite important that greater attention be allocated to the importance of integrity in infrastructure sector governance.

## NATIONAL POLICY FRAMEWORK FOR PRIVATE SECTOR DEVELOPMENT

A key dimension of GOSL policy is to target improved conditions for private sector development. These include privatization of many state owned enterprises, preparation of a new Public Private Partnership Act (PPP) plus concerted effort across a range of measures to improve the investment climate. Each of these will be described and appraised below. Overall, the sum of these efforts will make valuable contributions to the transformation and modernization of Sierra Leone's economy but it seems fair to observe that much of GOSL policy orientation is to make conditions more favorable for FDI. It seems important to emphasize that measures to strengthen the domestic private sector should gain equal attention as the country moves forward.

### PRIVATISATION

Emerging from conflict, Sierra Leone possessed a large number of parastatal corporations engaged in the commercial sphere of the economy. In line with a reorientation towards private sector led growth, GOSL adopted a Privatisation Act in 2002, established a National Commission for Privatisation (NCP) and charged it with the divestiture of numerous enterprises, a subset of which are identified in the accompanying box. NCP has prepared privatization plans and asset or going concern valuations on a case by case basis, developing strategies to secure the best possible transformation of each enterprise, at times choosing liquidation or sale as a going concern and other times introducing changes in sector governance as with the conversion of SLPA into a port landlord and securing of a concession contract for QE II container terminal operation. Many times there has been a need to prepare a multitude of upstream measures to clear the way for competition and private entry into a sector and this is naturally more complex when the incumbent structure is monopolistic. An example would be NCP's active engagement in the power sector to sponsor development of new sector legislation, pave the way for creation of a sector regulator and other necessary measures in advance of PSP in the power sector. NCP's mandate is not yet complete and GOSL has decided as a matter of policy that it should stay in operation until it has completed its divestiture task but not be given a new mandate of implementing public private partnerships.

The Privatisation Act has been criticized for vesting an excess of power in the hands of the NCP whereby removal of "scheduled" SOEs from line ministries and placing them under a direct reporting line to NCP has caused disengagement of line ministries and slowed their support of wholesale sector reform. At the same time, this legislated arrangement was likely based on a previous generation of lessons learned from global privatization experience whereby line ministries have often been found to be protective of the status quo and have presented obstacles to divestiture. Unfortunately, the genesis of such problems probably stemmed from the inclusion of both commercial enterprises and public service enterprises under the same Privatization Act and transformation schedule without adequately recognizing the distinctions. Recent experience suggests that nation states benefit from full withdrawal or outright "divestiture" from ownership and engagement in fully commercial functions, such as brewery operations

or commercial banking. However, where an SOE was established to perform a service which delivers a public service or public good, that service is still required and has not been supplanted by spontaneous market entry of a private provider, divestiture is not an option that governments can entertain. In approaching alternative PSP models other than divestiture (a huge continuum that ranges from out-sourcing to contracted management or concession arrangements), the technical knowledge and sphere of influence of line ministries is best brought to bear. There is now a desire to address the excessive power of the NCP via the adoption of a new PPP law that will set up rules for "Greenfield" investment.

While this may be warranted, the misfortune could be that the new Act will swing the pendulum perhaps too aggressively back towards line ministry control instead of curbing the limitations of the current privatization act. In the process, capacity which Sierra Leone has built up to secure private sector participation in transformed public-sector institutions could be lost. This is knowledge and experience that is highly relevant to the preparation of complex PPP type transactions, especially if local experts are twinned with expatriate TA. GOSL is thus encouraged to consider how it might retain or transfer the indigenous capacity it has built within NCP into the yet-to-be created PPP unit within government.

## PUBLIC PRIVATE PARTNERSHIPS

Frustrated that the rate of inward investment is still less than desired, a key legislative measure is currently underway to address further bottlenecks. Specifically, a PPP law has been drafted with the intent to provide reassurances to investors over the security of private investment in long-lived industry and infrastructure. Parallel legislation is also being prepared for the energy sector to specifically entice PSP in independent power production. Going beyond the divestiture of existing assets, GOSL seeks to engage the private sector in the realization of green-field project development, including large scale infrastructure such as power generation, hospitals, schools, airports and prisons. The PPP law designed to meet this need has gained Cabinet and Parliamentary approval but is presently with the Executive office for final ratification or amendment. This Act seeks to blend reforms to the Public Procurement Act of 2004 with inducements that provide for a secure, risk-informed investment environment in long lived assets and infrastructure by private investors. With respect to procurement, the Act will adapt some of UK best practice in public sector procurement whereby public sector spending will be charged with comparing the whole life cost of service delivery under public or private sector approaches as well as against a "value for money" standard. At the same time, the Act will provide a legal framework setting the boundaries in which the government can or cannot maneuver to entice private investment. This is necessary because PPP negotiations often result in an allocation of risks with financial consequences between public and private partners. Where these involve aspects of government guarantees or absorption of market risks, for example, contingent liabilities will arise and these must be anticipated, evaluated as to affordability and considered against government's macroeconomic policies of not undertaking undue expansion of the national debt or recurrent liability. For this reason, it is highly recommended that GOSL locate the eventual PPP unit within the debt management unit of the Ministry of Finance in order to appropriately situate this technical support unit to Line Ministries under their fiscal oversight. Three other suggestions are also offered for consideration by GOSL:

**1.** It should be recognized that PPPs are highly complex contractual instruments and it is important that experience be permitted to accumulate within a technical PPP unit which houses long term national expertise supplemented by transaction-specific experts on a case by case basis. In this manner, Line Ministries can gain the benefit of cumulative experience gained by national counterparts and their perspective can bring valuable technical independence to transactions. For example, rather than creating a sector regulator to go with each and every infrastructure-sector PPP initiative, an influential central unit will help Ministries see the value of institutional aggregation and efficiency.

**2.** Not all companies or countries define "partnerships" in the same manner and Sierra Leone will undoubtedly be approached with a broad spectrum of PPP approaches. This is to be welcomed but what is important is that the country always structure deals by involving maximum competition in the partner selection process as this will result in greater value to the country. Concurrently, it is important that Sierra Leone have great confidence in the value of the consideration being offered in exchange, such as in cases where this might be a mining concession for instance. Where the country feels a degree of imbalance at the PPP negotiating table, it should not hesitate to ask for legal support from MDBs, global legal support funds or a number of other resource pools that can help GOSL to affordably level the playing field.

**3.** Finally, it is noted that the draft PPP Act moved very swiftly through Parliament and perhaps a round of consultation with development partners and the private sector would be valuable before it is promulgated into law.

### Box 1.9: Parastatals Slated for Privatization

Sierra Leone Housing Corporation
Sierra Leone Produce Marketing Board
Mining and General Services Limited
Sierra Leone Road Transport Corporation
Sierra Leone Postal Services Limited
Sierra Leone Telecoms Company Ltd
Sierra Leone Airport Authority
National Power Authority
Sierra Leone Ports Authority
Guma Valley Water Company
Sierra Leone Nat'l Shipping Company Ltd
Forest Industries Corporation
National Insurance Company Limited
Sierra Leone Commercial Bank Limited
National Development Bank Limited
Sierra Leone Roads Authority
Rokel Commercial Bank Limited

## NATIONAL AGRICULTURE POLICY FRAMEWORK

Sierra Leone began the new millennium with a focus on smallholder subsistence agriculture which was primarily oriented towards food security. Lessons learned from PRSP 1 brought to light the added importance of improving incomes by increasing emphasis on commercialization while maintaining a focus on food security. As noted earlier, PRSP 2 identified agriculture as a strategic priority sector and it laid out a broad prescription for agricultural sector evolution as presented in Table 1.36.

Following from the orientation provided by PRSP 2, the Ministry of Agriculture, Forestry and Food Security (MAFFS) devoted significant thought and effort to developing its National Sustainable Agriculture Development Plan 2010-2030. This includes national policy statements on agriculture and, at the same time, doubles as Sierra Leone's national implementation strategy for their compact under the Comprehensive Africa Agricultural Development Program (CAADP) with ECOWAS. The NSADP takes into account advantages, opportunities and constraints to be overcome and maps a way forward. Government pledged to increase its budgetary allocation to agriculture to achieve the ten % expenditure target adopted by African leaders in Maputo and a level of 9.9 % was achieved in 2010 up from 1.6 % in 2008.

Presently, too much food crop production is carried out on a subsistence basis. The national plan, key pillars of which are featured in the accompanying box, identifies challenges that include declining soil fertility, low technology levels, lack of input intensive production processes, marketing bottlenecks, weak producer organizations and a lack of farmer empowerment. NSADP acknowledges the importance of connecting the rural poor to the market economy through better developed agricultural value chains and seeks to engage smallholders in farming as a business through the Smallholder Commercialization Program. It is doing this by organizing them into farm based organizations and helping them engage in product commercialization. Although there are differences according to land type, the dominant practice is shifting cultivation with a cropping pattern that mixes rice cultivation as a main crop with other tubers and vegetables. NSADP identifies that it would be preferable for smallholders to switch to permanent cropping patterns that blend higher value and more sustainable tree crops with food crop inter-cropping. Concurrently, government seeks to encourage private sector entry into the crops sector by providing a business climate that will induce investment in ancillary activities such as mechanization, post-harvest drying, processing and marketing. The two components, smallholder and private sector commercialism, are to be complemented by an upgrade in agricultural research and extension delivery systems. Taken together, this package of measures is designed to increase the "density" of agricultural value chains and improve the transmission of incentives and signals to all participants involved. These policy measures are fully appropriate to Sierra Leone's circumstances and are suited to addressing the transformation from subsistence to commercial agriculture as is urgently required. Two limitations, however, are that agricultural policy places too much emphasis on rice without adequate attention to other food crops and it places too little emphasis on the benefits that could be derived from greater engagement in cross-border trade.

As was identified earlier, the non-availability of freehold land has been repeatedly identified as a major constraint to private sector investment in agriculture. This appears to be a difficult arena for a fragile state to promote radical change given that the community ownership system established during the colonial era is very much favored among paramount chiefs and there is a desire to maintain support and stability among this constituency. Against this backdrop, the Ministry of Agriculture has sponsored a practical solution for access to land which they are promoting through an "Investment Policies and Incentives Guide". Under their scheme, Government has developed a "50 + 21" land lease arrangement whereby Government makes a land-use arrangement with

**Table 1.36: Prescription for Agricultural Sector Productivity Enhancement within PRSP 2**

| Sector Framework | Crops and Livestock | Fisheries |
|---|---|---|
| **Goal** | **Enhance productivity** | **Enhance productivity** |
| **Strategies** | • Increase agricultural productivity through intensification and diversification<br>• Promote commercial ag through PSP<br>• Improve ag research and extension delivery<br>• Mainstream cross cutting issues and gender inclusion | • Provide fisheries surveillance capability<br>• Facilitate lifting of export ban on fish exports to EU<br>• Provide adequate extension service to artisanal fisher-folk |
| **Policy** | Identified need to develop a sustainable Ag Plan, research & extension policies. Encourage shift from subsistence to commercial farming. | Need for fisheries policy identified |
| **Institutions** | Upgrade MAFFS planning & supervision including enhanced ag statistics ; ag research | Strengthen MFMR capacity |
| **Regulation** | No specific regulatory prescriptions identified | Reform fishing licenses and concessions to quota system |
| **Investment Plans** | Prioritize investment in post harvest storage, feeder roads and community markets | Improve infrastructure & support services for commercial fishing |
| **Regional Aspects** | Develop exports | Develop exports |

the community and then sub-leases it to the private sector for 50 years extendable by +21 more. While this may be adequate to attract investment within the agricultural sector, it is less likely to secure long term investment in capital intensive industry or long-lived infrastructure. Nonetheless, MAFFS has pre-acquired a large supply of land from paramount chiefs which it now has available for onward leasing to investors. The intention is to make it attractive for private investors to develop tree crop plantations, invest in irrigated rice production and develop sugar and oil palm plantations from which to obtain consumable food commodities as well as bio-fuels. SLIEPA indicates that the policy is beginning to have the desired effect.

## NATIONAL POLICY FRAMEWORK FOR NATURAL RESOURCES

Sierra Leone is endowed with abundant and varied natural resources including fertile land, minerals, forests and physical features favorable to leisure tourism. Yet, the country has experienced first-hand the "curse" that mineral wealth can cause. For this reason, PRSP II views the agricultural sectors as having better prospects for distributing the benefits of economic growth during the recovery period. Nonetheless, the country recognizes that increased growth, especially from extractive industry, could be realized after improvements are made in governance of the sub-sector and this is recognized as an important pre-condition to increased investment. Sector policy goals and prescriptions are presented in Table 1.37.

### Box 1.10: Key Pillars of NSADP

- Commercialization of key commodities through (a) small holder schemes and (b) medium to large farmer production schemes
- Investment in infrastructure with a focus on (a) feeder roads, (b) irrigation, (c) post-harvest technologies for storage and processing and (d) rehabilitation of research facilities;
- Private sector promotion through legislation and policy change to induce greater domestic and foreign private investment in agriculture
- Introduce efficient and effective management for accountability and transparency.

Each sphere of natural resource development presents different opportunities or challenges for the nation but the linkages between sound approaches to management and economic growth are understood. In the case of forestry, for example, the stark fact is that original forest cover has been reduced from 60 to 3 % of land area and the resulting erosion and degradation of soil fertility is felt in the agriculture sector. In the same vein, preservation of Sierra Leone's forest beauty is important for ecotourism, which can become an important source of jobs. The policy framework seeks to elucidate the connections between optimal natural resource management and poverty-reducing growth.

Since the issuance of PRSP 2, Sierra Leone has moved forward with updating its mining, forestry and environmental policies and has amended its mines and minerals legislation. A critical area which deserves further reflection and possible modification pertains to the mining sector. On the one hand, the governance framework pertaining to mineral royalties has been amended and improved and this will usher in a favorable increase in domestic resource mobilization. On the other hand, there is likely too much emphasis placed on tax holidays, tax-loss carry-forwards and other incentives to entice FDI into the sector. GOSL and the Ministry of Mines and Industry are encouraged to consider an alternative approach. That approach would seek to develop mining-infrastructure clusters through coordinated regional action in conjunction with Liberia and Guinea. If these three MRU states were to unify and harmonize their mining investment regimes and combine forces to build public-sponsored infrastructure that served mining sector interests (as well as other purposes and customers), the incentives for FDI would still be strong and compellingly attractive to the world's biggest and best mining companies. Rather than accomplishing enclave-based entry and participation in the economy on the basis of self-sufficiency in infrastructure, this alternative policy and development approach could increase the returns to the regional economy and accelerate a more inclusive pace of growth. Although this is a regional perspective, its pursuit could undoubtedly serve to accomplish key national objectives for the mineral resources sector.

## NATIONAL INFRASTRUCTURE POLICY FRAMEWORK

Sierra Leone does not have, nor does it intend to have a single all-encompassing infrastructure policy. At the same time, the country emerged from conflict with out-dated policies and legislation and a lack of strategic investment plans across most of its infrastructure sectors. Also, while significant amount of infrastructure stock was destroyed due to the conflict, a substantial amount of deterioration had been caused by poor policy frameworks to encourage better governance and institutional performance, including the financing of and dedicated attention to recurrent maintenance. As a consequence, GOSL has had to systematically bring the infrastructure sector policy frameworks up to date beginning with priority emphasis on electrical power and road transport as was prescribed by PRSP 2. The rationale for enhanced public investment in the latter sub-sectors is that it will help to "crowd in" private sector investment and initiative in spheres of the economy that require electricity and transport. This is relevant logic and remains suited to Sierra Leone's circumstances and strategy for addressing poverty.

Since publication of PRSP 2, significant progress has been made by GOSL in systematically tackling the policy, legislative, regulatory and institutional environment for key infrastructure sectors, notably power, transport, water and sanitation and communications. These efforts continue apace and Table 1.38 reveals that, to date, policy has been updated in 2009 and 2010 for power, water and sanitation and ICT. Though progress has been made in the updating of road sector policy, efforts are still on-going to develop a comprehensive transport policy

Table 1.37: PRSP 2 Prescription for Natural Resources Oversight

| | Tourism | Minerals | Land/Environment | Forestry |
|---|---|---|---|---|
| **Goal** | Stimulate economy through Job creation | Benefit from extractives to support national and community dev't | Protect natural resource base to complement efforts to reduce poverty | Preserve benefits of forest ecology and mitigate hazards of deforestation |
| **Objectives** | Mobilize PSP<br>Revitalize leisure tourism<br>Create jobs<br>Provide poverty-alleviating income | Transparently and equitably increase revenues, jobs, forex mitigating environmental impact | Develop land management information system and Land Use Plan at various levels of gov't | Establish sustainable forest management scheme to distinguish & enable conservation, community, commercial forests each to thrive |
| **Policy** | Tap advantage of endowment in natural resource beauty | Revise core minerals policy | Gov't role as enabler; Land policies to be developed | Formulate new forest policy |
| **Legislation** | | Mining laws to be reviewed | Environmental protection Act 2000 | Formulate new forestry legislation |
| **Institutions** | SLIEPA and MTI to develop sector competitiveness strategy | Restructure Ministry of Mines | Empower & Upgrade EPA and Ministry of Lands, Country Planning & Env't | Restructure forestry division |

to cover the breadth of different transport sectors. At the same time, given PRSP 2 emphasis on private sector led growth, each sector has given consideration to the potential role of PSP in sector operations and investment and the forthcoming PPP legislation is expected to advance that agenda. Also, PRSP 2 expressed the view that benefits could be gained from cross-border investment in infrastructure and this has been taken into account as appropriate by each sector framework and investment plan.

Table 1.38 presents a comprehensive summary of the progress achieved to date with each sector's policy framework and short paragraphs follow to touch upon unique aspects relevant to each one. One key recommendation which GOSL might want to consider from a holistic perspective is that Sierra Leone is a small country and while there is a need for regulation in multiple sectors, including power and water, the concept of a multi-sector regulator might be more affordable and appropriate to the market size and this should be considered as a cross-cutting solution rather than one which would be advanced by distinct ministries.

## POWER SECTOR POLICY FRAMEWORK

As was identified in the review of the current status of the power sector, this is a sector which requires wholesale reform. Since the most urgent priority after the conflict was to urgently undertake repairs and reconstruction in order to deliver a modicum of power to enable recovery to get underway, it will be in 2011 that the institutional side of power sector reform will get fully underway.

The sector currently operates under a single-buyer model but the vision is to embrace a hybrid sector where the private sector enters and contributes to sector performance both as an investor in generation and operator as an independent power producer selling power into the national grid and possibly also as an operator at the retail end of the spectrum, through privatization of NPA or entry into provision up country. Meanwhile, Sierra Leone's policy also calls for participation in the ECOWAS energy market through membership in the West Africa Power Pool and an investment project is currently under preparation to realize this aspiration.

This vision has required a complete restructuring of the policy and legislation for the sector. The policy component has been developed by the Ministry of Energy and Water Resources (MEWR) while preparation of a new Electricity Act that paves the way for establishment of a sector regulator has been overseen by NCP.

The intention is to pursue sector reform in stages. The first aims to restore the financial and operational viability of NPA and complete essential investment in transmission and distribution so as to provide the essential backbone for the creation of what can become a "national" grid which can expand over time to serve more than a small part of Freetown. Sierra Leone believes it is important to achieve the nucleus of a national grid in order to participate more effectively in WAPP. Subsequently, Sierra Leone contemplates attracting large scale private investment through PPP arrangements for further development of hydro-generation. This will enable the country to meet an expected growth in power demand as well as participate effectively as an exporter into the West African power market.

Finally, Sierra Leone also aims to develop a rural electrification policy and strategy so as to deliver power supply into pockets of the economy where power improvements are expected to produce significant increases in productivity and output. At present the dominant institutional solution being contemplated is to establish a Rural Electrification Agency and pursue off-grid technologies that make use of small scale renewable energy such as mini or pica-hydro schemes or solar technology.

## TRANSPORT SECTOR POLICY FRAMEWORK

As indicated above, a comprehensive policy for the transport sector does not yet exist, but initiatives have been underway to reform and upgrade the delivery of services

in the interim. For example, NCP has helped SLPA convert into a landlord port authority and procure a concessionaire for the operation of the country's key container terminal. Investments are being made to upgrade Lungi International Airport, but policy endorsement of the Yamassoukro accord favoring "open skies" competition in airport access is needed and GOSL has aspirations to undertake an ambitious area development project that would establish a new international airport in conjunction with relocation of the administrative capital of the country.

The roads transport sector has seen significant advances in governance sponsored by two key sector institutions, the Sierra Leone Roads Authority (SLRA) and the Sierra Leone Roads Transport Authority (SLRTA). The SLRA's primary tasks are to plan, administer, design, construct, operate, rehabilitate and maintain the National Road System. It uses the financial resources of the Roads Fund to defray expenses incurred in routine, periodic and emergency maintenance of roads and to defray its administrative expenses. The SLRTA operates within a legal framework provided by an Act of Parliament that set up the Authority, The Road Transport Authority Act of 1996. It commenced operations in February 1997.

Whereas SLRA has responsibility for the core road network, SLRTA is road-user oriented and its services include functions such as vehicle testing, fitness and standardization; licensing of drivers and vehicles and enforcement of traffic laws. SLRTA has powers to impose road user fees. Most of the licensing and registration fees collected by the SLRTA are paid into the Road Fund and the fuel tax contributes likewise. This is available for use by SLRA to maintain the core road network. A major issue still to be addressed is the outdated Road Traffic Regulations and Highway Code.

SLRTA has made progress on the re-drafting of these regulations but legislative endorsement is needed to move ahead with the implementation of an axle load policy that brings Sierra Leone in line with ECOWAS standards.

### WATER AND SANITATION POLICY FRAMEWORK

Government developed a new Water and Sanitation Policy in 2009 with the short to medium term objective of improving the provision of sustainable sate water supplies and sanitation facilities in urban and rural areas. PRSP II expresses Government's overarching aim to make available potable water to as much of the population as possible, targeting high population density areas as a poverty-alleviation measure on an emergency basis and then recognizing that further water sector development will need to be addressed over medium and long term phases. National Water and Sanitation Policies were finalized in December 2010.

The latter articulates comprehensive policy objectives for water resources management, urban water supply and sewerage, rural water supply, hygiene and sanitation as well as objectives for the institutional, legal and regulatory framework. This envisages the establishment of a National Water Resources Board, enactment of a new Water Law and introduction of a regulatory regime to balance economic and social objectives. Sierra Leone is a member of the Water Resources Coordination Unit of ECOWAS and it recognizes the need to develop riparian usage rights policy and regulation over the sharing of Mano River water resources with its neighbor, Liberia.

### COMMUNICATIONS SECTOR POLICY FRAMEWORK

Although not given much explicit mention in the Agenda for Change, Sierra Leone has nonetheless devoted significant thought to the importance of ICT and has taken progressive steps to liberalize the sector.

A telecommunications regulator was set up soon after conflict abated and it set about liberalizing the sector through the licensing of four mobile operators and inviting them into the market. The rapid expansion which followed in telephony subscriptions in the country are a great success and testimony to the policy wisdom applied in this sector.

A National ICT policy was established in May of 2009 which aims to integrate Sierra Leone regionally and globally through the use of ICT and Sierra Leone has joined an ECOWAS initiative to bring a new fibre optic landing cable to West Africa.

Sierra Leone has also joined the ECOWAS Wide Area Network for the purpose of establishing a virtual private network with key government authorities in the economic community and in the Commission. Participation will enable the country to participate more effectively in promoting the "free movement of goods and people" throughout ECOWAS.

A key policy issue facing the ICT sector is the monopoly rights to the international gateway vested in the sector incumbent, Sierra Tel via the Telecommunications Act of 2005. This is being revised and it is vital that a revised act be adopted which removes this monopoly as it will provide for better downstream competition and maintain pressure on sector enterprises to continue adopting the newest ICT technology available in the world. A new act should be prepared with due care and thorough consideration of how "open access" can benefit the nation, and hopefully by the end of the first quarter 2012.

## NATIONAL TRADE POLICY FRAMEWORK

In the pre-war era trade policy favored import-substitution and self sufficiency in products that could be produced locally. It also favored foreign exchange generation from export of primary products to foreign markets beyond the continent for which purpose it operated a parastatal, the Sierra Leone Produce Marketing Board to handle the purchase and marketing of global export crops.

## Table 1.38: Updated Policy Frameworks for Key Infrastructure Sectors

| | Power | Transport | Water & Sanitation | Communications |
|---|---|---|---|---|
| **Policy** | Sierra Leone National Energy Policy published September 2009 | No National Transport Policy; | National Water & Sanitation Policy published in December 2010 | • National ICT Policy of Sierra Leone published May 2009<br>• Open access is key policy |
| **Legislation** | A new National Electricity Act has been developed. It has been approved by Cabinet and will soon go to Parliament. It will establish the basis for the Electricity & Water Regulatory Commission | Updating of sector legislation will be needed to reflect the national transport policy once finalized | Water resources mgm't carried out on a sectoral basis. Seven sets of legislation pertain to the sector and these are outdated and inadequate. Require review and revision within a new Water Act. | Telecommunications Act of 2005 established NATCOM & gave Sierra Tel monopoly over international gateway. To be amended (est'd April 2012) to adapt to entry of internet & fibre optic technology and to legislate principle of "open access" |
| **Regulation** | None at present; creation of Energy and Water Regulatory Commission has been sanctioned in draft legislation | SL Maritime Administration, SL Road Traffic Administration, SL Civil Aviation Agency | A National Water Resources Board to be established and an Energy & Water Regulatory Authority | NATCOM Regulating Telecoms and Internet/Fibre Optic Cable. Needs new regulations for fiber optic. |
| **Strategy** | Sierra Leone National Energy Strategic Plan | • SLRoads Authority has Strategy & Investment Plan for Roads;<br>• GOSL promoting Freetown hub dev't strategy | National WASH Strategy published Dec 2010 embracing five strategies including comprehensive plans for integrated sector management | Strategy to pursue E-Government Readiness has been developed |
| **Institutions** | • Ministry of Energy and Water Resources | Ministry of Transport and Aviation | • MEWR will continue major role in sector oversight; to be renamed Water Department | • Ministry of Information and Communications setting policy |
| | • National Power Authority | Sierra Leone Roads Authority | • There are 13 other institutions with responsibilities and connections to the water sector, including Guma Valley Water Co supplying Freetown and SALWACO responsible for urban supply in up country towns, Ministry of Local Gov't etc. | • Sierra Tel as incumbent fixed line Operation; still SOE |
| | • Bo-Kenema Power Station | Sierra Leone Port Authority | | • Four licensed private mobile operators |
| | • Bumbuna Hydro-Power Ltd. | Sub-sector regulators | | • SALCAB, PPP Special Purpose vehicle being established to host international landing station |
| **Issues being Addressed** | • Unbundling of Sector and broad power sector reform program being initiated;<br>• Establishment of Rural Electrification Agency to be pursued | • National transport policy under development;<br>• There is a need for ECOWAS axle load standards to be incorporated in SL legislation | • Aim is to halve, by 2015, percent of people without sustainable access to drinking water.<br>• Transfer of SALWACO to Local Gov't authority to be achieved when capacity developed | Need to legislate for removal of int'l gateway monopoly of Sierra Tel and to provide for regulation of fibre |
| **Tariffs** | Currently set by MEWR; Tariffs were formerly too low to recover fuel costs; now too high relative to hydro-generation | Not clear how tariffs are set in regulated spheres of transport sector. | Tariffs have been too low for GVWC and SAWALCO to be financially viable, undertake maintenance & be sustainable | Unregulated. Set through competition though the regulator monitors |
| **Status of Private Sector Participation in Sector & Infrastructure** | • Addax Bio-Energy Sierra Leone; other IPPs expected to enter generation | GOSL seeking PPP for road construction and airport upgrade | PSP desired in GVWC operation via management contract | • Planned Privatization of SALCAB<br>• Planned privatization of Sierra Tel |
| | • Planning a hybrid public & private power sector, with IPPs | Container terminal operations placed under LT concession | Policy encourages increased role of PSP in dev't and provision of water supply, waste disposal service and sanitation activities | |
| | • First private IPP will be ABSL | PSP desired in construction of river jetties | | |
| **Regional Initiatives** | Sierra Leone to participate in West Africa Power Pool and energy market through CLSG Transmission Line infrastructure project | Southern Coastal highway links between Sierra Leone and Guinea and Liberia are endorsed. Funding for former secure; latter is sought | Policy encourages regional and international cooperation on utilization of trans-boundary water resources but no specific investments under development | • ACE Submarine Fibre Optic link and landing station;<br>• Preparing for participation in ECOWAS Wide Area Network VPN |

Under the first poverty strategy, Sierra Leone launched a Diagnostic Trade Information Study[58] with help from UNDP to identify trade spheres in which the country could quickly tap its natural advantages to regain a degree of competitiveness.

On the institutional front, GOSL restructured the Sierra Leone Export Development & Investment Corporation (SLEDIC) into the Sierra Leone Investment and Export Promotion Agency (SLIEPA) and gave the new agency a narrower focus of promoting exports and investments plus a mandate to develop an export strategy. This reflected a deliberate policy to take government out of the business of running a parastatal commodity marketing purchasing organization. The latter policy choice has now been reversed. GOSL has decided that there is too much concentration in the purchasing and export of key tree crop commodities, notably cocoa and coffee, and moreover, this cartel is largely handled by traders of foreign origin. In addition, there is a need for a public sector change agent to lead the process of introducing quality management systems in the export produce marketing chain. For this reason it has recently been decided to establish a new Produce Marketing Company which may, over time, re-divest a majority of shares to the private sector. This is an awkward solution and an alternative might be to encourage greater synergies between the cocoa/imported rice value chain and the domestic rice production value chains. Greater policy support in favor of regional trade will also serve to strengthen the environment for cross-border trade and the competitiveness of trade.

SLIEPA developed a National Export Policy with assistance from the Commonwealth Secretariat which was approved and published in June 2010 before completion of a comprehensive trade policy. Aside from mineral exports, the National Export Strategy places emphasis on the revitalization of agricultural exports and the target is to increase the value thereof annually by 50% from $33.1 million in 2009 to $251 million in 2015.[59]

The National Export Strategy expresses clear support for global trade but remains guarded in terms of regional trade. The NES vision is to transform Sierra Leone "into a flourishing country through a *globally* competitive export driven economy" and the stated objective of the strategy is "to improve the *international* competitiveness of a country leading to enhanced export performance."[60] While there is no specific mention of regional trade, there is a short reference to South-South trade (referring to markets outside the continent) and the opportunities that offers. This omission should be corrected by publication of an explicit regional trade policy or chapter within the NES. Within agriculture, the commodities it identifies for export emphasis include traditional crops including coffee, cocoa, ginger, chili, oil palm, rice and cassava plus newer crops such as sugar and cashews. Rice appears to be recognized within NES as the only crop clearly destined for regional trade (once self-sufficiency is reached), whereas oil palm and cassava which are in strong demand across local borders are considered in terms of their potential to respond to demand outside of Africa. In this sense, the NES side-steps the issue of regional trade and looks at the issues which will enhance the competitiveness of Sierra Leone in the arena of global trade. It is as if cross-border sales are not considered "exports" of equivalent measure to commodities in demand by developed countries.

A revised trade policy was developed during 2010 and it is presently before Cabinet for approval along with a Trade Development Strategy. Sierra Leone did not lend significant additional attention to trade as an element of the second poverty reduction strategy, except to recognize the importance of re-developing exports from the agricultural sector as a means of improving rural incomes. The PRSP strategy specifically sanctioned actions to enhance cocoa and fisheries exports. The recently drafted policy gives recognition to global trade initiatives by situating itself under ECOWAS leadership on trade negotiations with the EU for the Economic Partnership Agreement and WTO for the Aid-for-Trade dialogue. It prescribes that GOSL will support ECOWAS negotiations to obtain the most flexible, asymmetric and phased arrangement possible to ensure that Sierra Leone maintains and improves market access while protecting sensitive industries until they are ready to compete. It specifies policy objectives of improving market access for Sierra Leone's agricultural, industrial and fisheries products while improving the country's ability to compete. It strives to obtain global tariff reductions on goods produced in Sierra Leone and reductions in subsidies on products that compete with nationally produced goods.

With respect to regional trade, the new policy statement recognizes that Sierra Leone has adopted ECOWAS' protocols for an Enhanced Trade Liberalisation Scheme and agreed to implement a Common External Tariff as a member of the ECOWAS Customs Union. As identified earlier in this section, MAFFS updated agricultural sector policy in the 2009 NSADP "to make agriculture the 'engine' for socio-economic growth and development through commercial agriculture" by encouraging entry of the private sector and by linking small and large farmers to market economies. Since it was issued in advance of a trade policy statement, NSADP expresses the following aspirations with regard to regional trade:

*"It is therefore hoped that the NSADP/ CAADP Compact will significantly input into the formulation of an*

58 Sierra Leone: Adding Value Through Trade for Poverty Reduction , A Diagnostic Trade Integration Study, UNDP October 27, 2006.
59 Sierra Leone National Export Strategy 2010-2015, June, 2010, page 19.
60 National Export Strategy, Republic of Sierra Leone, page 3. Italics for emphasis are ours.

*ECOWAS sub-regional and an African continental compact. Regional trade has great potential for economic development in the ECOWAS region including commodities such as milled rice, goats, dairy and poultry products, fruit juices and eventually bio-fuels as petroleum products become rarer."*[61]

At the same time, NSADP is silent on any specific actions to develop regional trade further and this omission was noted after Sierra Leone's Plan was reviewed ECOWAS when accepting it under the CAADP compact. Other observations regarding aspects of policy and practice serve to reinforce the observation that there is a degree of policy ambivalence towards cross border trade. For example, there are no formally designated "Community Road Axes" which denote trade corridors running North-South between Sierra Leone and neighboring countries within the ECOWAS Inter-State Road Transport Convention. This contrasts to the situation in other West African countries which have developed strong trade corridors between landlocked countries and coastal ports. Furthermore, Sierra Leone has explicitly discouraged regional exports on an intermittent basis in recent years by placing periodic bans on rice and palm oil exports, including during the first quarter of 2011. The national Rice Development Plan states clearly that self-sufficiency in rice production should precede engagement in regional rice trade. The plan identifies that the priority for the interim remains focused on "self-sufficiency" and the objective is to meet total national consumption requirements through internal distribution as revealed in the following statement:

*"Medium term strategy is to recapture Freetown and small town markets with quality milled rice. Long-term strategy is to enter regional trade. Government facilitation will be required for a rice milling private sector to develop while increasing production with better access to inputs and mechanization for small to large farms."*

The sum of these observations and the lack of a regional trade action plan suggest a high degree of ambivalence towards regional trade as summarized in the accompanying text-box. The Ministry of Trade has offered a practical interpretation of the situation which helps to explain the observed ambivalence. The point made is that Sierra Leone has often experienced harm from informal patterns of trade and especially smuggling such as illegal trade in artisanal diamonds and drugs as well as the unlawful harvesting of bush meat. Accordingly, the country recognizes a need to encourage a shift in trading behavior away from informal trade and towards formally sanctioned imports and exports across borders.

## PARTICIPATION IN REGIONAL ORGANIZATIONS AND REGIONAL POLICY FRAMEWORKS

Sierra Leone is a member State of the Mano River Union and of ECOWAS. This section sets out the background of each organization and explores Sierra Leone's participation therein, including adherence to policies they have promulgated and participation in regionally sponsored cooperation initiatives and infrastructure projects.

### MANO RIVER UNION

The Mano River Union organization was first established in 1973 as a customs union by Presidents William Tolbert of Liberia and Siaka Stevens of Sierra Leone on the premise that inter-regional trade and economic cooperation would be beneficial to both nations. Presently grouping Guinea, Sierra Leone, Liberia and Ivory Coast, the original trade-oriented mandate of the MRU has largely been allowed to whither. During the two decades between 1984 and 2004, as conflicts consumed its founders, the MRU lay dormant. Reactivated in May 2004 at a Guinea-Sierra Leone-Liberia summit, progress led to a heads of state summit in May 2008. On this occasion Côte d'Ivoire formally adhered to the Mano River Declaration and became a member of the Union.[62] In the intervening years, the Economic Community of West African States was established and it has gained over-arching legitimacy and momentum in leading the integration of West Africa. Presently chaired by Liberian President Ellen Sirleaf-Johnson, the opportunity now exists to revitalize the relevance of the Union to support cooperation among the four member States and work together on implementing the integration initiatives of ECOWAS.

As part of its re-genesis, the MRU Secretariat has sponsored a study examining the concept of multi-country growth "triangles" with a view to adapting it as a development strategy of relevance to MRU member states. The study builds upon the concept of competitive economic clusters and sets forth the fact that MRU states have abundant natural resources that do not match the development realities in the sub-region. Productive activities like agriculture and artisanal mineral extraction function with low productivity, contributing to smuggling, illegal border activities and fluctuating migration. Infrastructure is inadequate in the Union with power particularly lacking. Environmental issues now present threats to each country whereas they could be viewed and addressed from a sub-regional perspective. The study identifies specific geographic zones which could serve as growth poles to deliver benefits to several MRU states concurrently, and selects, for example, the zone in the Eastern Province of Sierra Leone which connects to Southeast Guinea and Northwestern Liberia. This corresponds to the zone portrayed in Figure 1.9 presented in Section 1.3 of this chapter where several cross-border markets previously operated. Features of importance in this area include the Makona River, tree crop

61 NSADP, Ibid, Page 22.
62 *Revitalizing the Mano River Union: A Briefing Paper for the Peacebuilding Commission,* Mike McGovern, June 2008

commodities produced for export trade plus known deposits of gold, diamond and iron ore, all of which could produce substantial benefit to otherwise isolated areas of each country's territory if they were to benefit from coordinated investment. In a workshop held in Monrovia in November 2010, delegates officially sanctioned the approach and encouraged the Secretariat to build the growth triangle concept into its strategy. The Secretariat is now finalizing its strategy and will submit it to the Union's Ministerial Council for approval in June of 2011. A key element of the strategy will be to consider the importance of bringing development to the isolated interior zones of MRU states since prosperity in these areas would make a vital contribution to regional peace and stability. The growth triangle concept is pursued in further depth in the discussion of promising areas for further economic growth in Chapter Two.

### Box 1.11: Policy Ambivalence towards Regional Trade

- NSADP mentions the desirability of ECOWAS developing regional trade but fails to identify any action plans that would contribute to this agenda.
- Expressed policy asserts that regional trade is condoned but states that self-sufficiency in rice should precede regional trade.
- The National Exports Strategy is oriented towards extra regional trade and omits all mention of regional trade.
- Periodic bans are place on rice and palm oil exports to Guinea and Liberia.
- There does appear to be a high degree of comfort with the concept of extra-regional trade and this is one of the drivers behind the encouragement of smallholders to widely adopt tree crop cultivation in their cropping pattern.
- The notion that food security can be achieved separately from food self sufficiency appears to be rejected.
- Overall, Sierra Leone authorities appear to view regional trade as a "threat" to food security. There is a particular concern about the exposure of poor, urban population segments to price fluctuations of key food staples.

Looking forward in time, it would seem worthwhile to add regional planning considerations as a dimension that each MRU member state might wish to address and prioritize in their next generation poverty reduction strategies. A suggestion in this regard is for MRU states to coordinate on preparing and publishing a single *common addendum* to their respective national poverty strategies, which can become an "Agenda for Regional Prosperity".

## ECONOMIC COMMUNITY OF WEST AFRICAN STATES

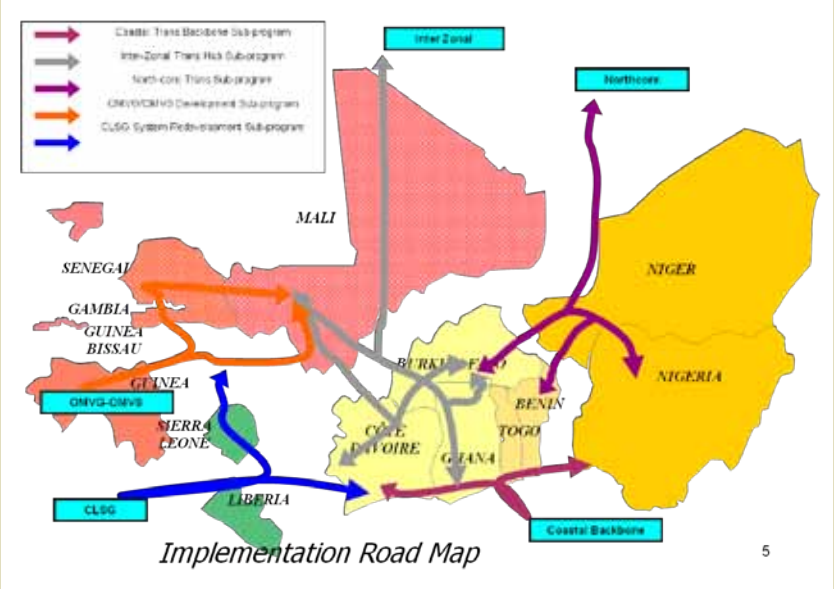
ECOWAS was established in May 1975 and its vision is to "create a borderless, peaceful, prosperous and cohesive region, built on good governance, and where people have the capacity to access and harness its enormous resources through the creation of opportunities for sustainable development and environmental preservation." ECOWAS, administered through its representational Commission, therefore strives to establish an open and unified regional economic space in West Africa through the setting up of regional markets for infrastructure services, including electricity, roads and communications. Sierra Leone's participation in ECOWAS might be characterized as more of a follower than leader and influencer of regional policy, but GOSL has chosen to participate to the extent it deems feasible given a need to balance domestic and regional priorities. Nonetheless, Sierra Leone recognizes the benefits of membership and participates most actively in regional programs likely to secure greater investment in infrastructure. Notable examples featured within this report are Sierra Leone's participation in the West African Power Pool (WAPP), communications infrastructure and the Community's proposed Wide Area Network, ECOWAN. The regional policy aspect of these projects is explored below and the project investment profiles and cost parameters are included within the infrastructure investment packages in Chapter Three. The paragraphs below touch upon Sierra Leone's participation in the landscape of regionally sponsored policy and regional integration projects.

**General Spheres of ECOWAS Policy Adherence and Operational Collaboration.** Sierra Leone holds 5 of 115 seats in the Community Parliament (allocated by population size) and the Ministry of Finance serves as the official liaison point into the Commission and specific staff has been assigned to carry out coordination functions. Sierra Leone is a member of the West Africa Health Organization, the West Africa Monetary Association and one of five founding members of the West African Monetary Institute. Sierra Leone is in the first batch of countries to have issued its citizens "ECOWAS" passports, welcoming incoming visitors and enabling visa-free movement of the region's citizens for up to six months in the country. The country is on an "enhanced" monitoring plan by ECOWAS' Chapter of GIABA—Inter-Governmental Action Group Against Money Laundering in West Africa. Under these auspices, Sierra Leone is receiving help to address its effectiveness in preventing money laundering and the financing of terrorism. Sierra Leone participates in ECOWAS' Enhanced Trade Liberalization Scheme and has agreed to the Common External Tariff for goods traded within the region. ECOWAS adopted an agricultural policy in 2005 (ECOWAP) establishing a vision of "modern and sustainable agriculture, based on the effectiveness and efficiency of family farms and the promotion of agricultural enterprises through the involvement of the private sector." This evolved into the Region's CAADP Compact in 2009 of which Sierra Leone became a signatory upon registering its national plan and the original ECOWAP themes do appear in Sierra Leone's own NSADP.[63]

**Collaboration to Build a Regional Energy Market.** ECOWAS created the West Africa Power Pool (WAPP) in December 1999 together with a regional Master Plan for Generation and Transmission of Electrical Power.

63 Sierra Leone became a signatory to CAADP on September 18, 2009 with the lodging of its National Sustainable Agriculture Development Plan.

## Figure 1.18: West Africa Power Pool Implementation Plan




## Figure 1.19: ECOWAS Plans to Connect "Missing Links"


This was followed by the ECOWAS Energy Protocol in 2003 establishing a unified legal and regulatory framework for cross-border power trade in West Africa and a revised Master Plan updated in 2005. In July 2006 WAPP was formally inaugurated as the Community's regional organization to drive the realization of the Master Plan and encourage the development of a regional power market embracing public and private electric utilities. ECOWAS established a regional regulator, ECOWAS Regional Electricity Regulatory Authority (ERERA) in January 2008 and it has been providing assistance to nations striving to develop their own national regulators. ERERA will increasingly serve as a regional regulator of cross-border exchanges of power as more countries connect into the WAPP grid. Figure 1.18 presents the Implementation Plan for the creation of the West African electricity grid by stages under the WAPP Master Plan and depicts how the CLSG System Redevelopment Sub-Program will intersect with other sub-programs in the region and eventually connect Sierra Leone into the region's energy market. Sierra Leone's NPA is a member utility of WAPP and is participating in the CLSG (Cote D'Ivoire, Liberia, Sierra Leone and Guinea) project to lay an inter-regional power transmission grid across the four MRU countries.[64]

**Collaboration to Build a Regional Communications Network.** Sierra Leone takes an active interest in the community's initiatives to change the ICT landscape within the region. The revised ECOWAS Treaty of 1993 states that Member States shall undertake to evolve common communication policies, laws and regulations in area of ICT. Article 33 stipulates that they shall "develop, modernize, coordinate and standardize their national telecommunication networks in order to provide reliable inter-connection among Member States, and shall coordinate their efforts with a view to mobilizing national and international financial resources through participation of the private sector in the provision of telecommunication services." Sierra Leone demonstrates strong interest in regional interconnection and looks forward to the day when communications between countries have been simplified. ECOWAS has developed a strategy to address missing links in ICT backbone, both through the laying of a new submarine fibre-optic cable which will connect Africa to Europe and through the ECOWAN project which aims to connect links between territorial backbone ICT infrastructure across countries and establish a region-wide virtual private network.

Sierra Leone will be participating in both of these regional infrastructure projects, more details of which are presented in Chapters Two and Three. The Community has also set up the West Africa Telecommunications

64 Diagram supplied by Energy and Power Study to Facilitate Interregional Trade and Exports in the ECOWAS Region, RISP Background Paper, November 2010, AfDB, page 27.

65 Programme for Infrastructure Development in Africa, Phase 1 ICT Report, 2011. PIDA further notes the following: "AU/REC strategies and projects for building regional infrastructure and addressing missing links are largely based on three false assumptions: The necessary infrastructure should be built by the incumbent fixed operators; When physical links are in place a new 'wholesale operator' owned by the RECs needs to be inserted into the market to operate an overlay network (ostensibly to ensure cost-based pricing) which would compete with the private sector wholesale providers, and Physical links are necessary between every country – this is based on the old voice traffic direction model which does not take into account the direction of the bulk of the traffic (Internet), and the economies of scale and virtual interconnection model provided by IP based interconnection (IXPs).

Regulatory Association, (WATRA) and vested it with a strong role whereby its decisions and directives issued by the Conference of Regulators are also binding on all national regulators. While Sierra Leone has been active in promoting PSP in its ICT sector, it has permitted the re-monopolization of the international gateway for communications traffic. This tendency of African States to permit monopoly or duopoly control over key infrastructure such as gateways or submarine landing stations is, according to PIDA, one of the biggest obstacles to further progress in the evolution of regional ICT development so it is being encouraged by development partners to effect a change in this structural constraint within its communications sector. Sector experts would likewise encourage ECOWAS policy to adjust in similar manner.[65]

**Collaboration in Regional Transport.** Inter-regional transport is one sphere where Sierra Leone is less relatively less active. Although the country is a signatory to the Convention regulating Inter-State Road Transportation between ECOWAS states, Sierra Leone does not play an active participant or advocacy role therein. This reflects the fact that the country has had no substantial inter-regional roads of a scale to support the transport of significant cargo by truck between countries other than those now being built. To date, Sierra Leone's engagement in regional trade has been informal by nature and while traditional trade patterns show reciprocal supply and demand for products produced by Sierra Leone, Mali and Senegal respectively, there are currently no major roads that facilitate trade with landlocked or other countries to the North. Consequently, Sierra Leone does not have any mainstream South-North trade corridors recognized by ECOWAS or MRU states, and only has two "Recognized Community Road Axes" scheduled within the convention.

This is far fewer than those recognized for other member states.[66] Generally speaking, WAEMU countries are further ahead with respect to regional transport policy and ECOWAS has only recently embraced into its own regulations provisions dealing with axle load weight controls and inter-state weigh station requirements. Figure 1.20 reveals the generalized lack of North-South and East-West trade corridors between the fragile fringe countries and the rest of West Africa and shows that the nation currently stands isolated from otherwise concerted efforts in the economic community to develop trade linkages between landlocked and coastal countries.[67] Whereas regional organizations like "Borderless West Africa" are working to expose bribery, hassles and delays on West African roads which inhibit trade and raise transport costs, countries which are the target of their criticism are at least participating in regional transport corridors and are learning through experience to improve relative performance in this critical sector for the community.

**Figure 1.20: No Inter-Community Road Corridors Connect Sierra Leone to the North**


## KEY FINDINGS AND CONCLUSIONS RE NATIONAL AND REGIONAL POLICY FRAMEWORKS

This section has identified that Sierra Leone has embarked upon a wide agenda of policy renewal, legislative and institutional reform across many sectors of the economy, including productive, infrastructure and trade sectors. Government has taken a cautious approach regarding revitalization of the mining sector, choosing first

66 ECOWAS-IST Convention, Chapter 2, Article 3.
67 Diagram downloaded with permission from www.borderlesswa.com.

### Table 1.39: Summary Policy Recommendations to GOSL

| | |
|---|---|
| **Macroeconomy** | • Strive to maintain fiscal discipline and macroeconomic balance |
| **Private Sector Dev't** | • In shifting emphasis from privatization to PPPs, strive to retain capacity which has been built and secure best value from competition in selecting partners |
| **Agriculture** | • To better implement Smallholder Commercialization policy, consider eliminating bans to cross-border trade |
| **Mineral Resources** | • Consider a regional mineral-infrastructure cluster development approach to sector enhancement as an alternative to the enclave approach currently in favor |
| **Infrastructure** | • Consider alternative of introducing a multi-sector regulator for power, water & communications instead of 3 separate ones |
| | • Recognize vulnerability of the infrastructure sector to corruption and strive to improve the pervasive weaknesses in infrastructure governance |
| **Power** | • In the context of a regional energy market, reconsider the phasing of investment and consider prioritizing investment that expands the national grid before investing in more hydro-generation |
| **Transport** | • Embrace ECOWAS road standards and axle-load regulations to reduce maintenance costs and extend the life of investments |
| **Water** | • Sustain policy measures to incentivize rural delivery of improved water and sanitation. Consider whether modifications to land ownership could increase investment in irrigation infrastructure |
| **ICT** | • Amend legislation to embrace "open access" policy and remove monopoly over international gateway |
| **Trade** | • Promulgate regional trade policies within National Export Policy and consider designating key trade corridors under ECOWAS ISRT convention. |
| **Regional Integration** | • Publish a single common annex to PRSP 3 which can serve as an "Agenda for Regional Prosperity" shared by Sierra Leone, Guinea and Liberia |
| | • Participate energetically in WAPP CLSG and ICT Missing Links ECOWAS programs. Develop a sub-regional trade capacity development program |

to establish a new set of ground rules for sector participation before considering it as a stable or reliable pillar for poverty reduction. Instead, emphasis has been placed upon agriculture as a key generator of livelihoods and poverty reduction and the transformational objective is to achieve a paradigm shift from subsistence to commercial agriculture. Significant progress is evident in some spheres of infrastructure, such as ICT, where liberalization was introduced early and the rewards are justifying the change. Other sectors, such as power, have had to prioritize an urgent focus on operational recovery before embarking upon wholesale structural change but the latter is now essential if further investment is to yield beneficial returns to the economy.

The area of trade policy is a relative laggard within the national policy landscape and it is clear that there is a greater degree of emphasis and comfort with global trade than is the case with regional trade. The ambivalence towards a resumption of cross-border trade likely reflects an overriding concern by GOSL on a multitude of factors with a bearing on stability, including a resumption of illegal smuggling that is fed by drug trafficking and un-sanctioned trade in precious minerals which, in turn, likely contribute to continued problems of corruption. Aside from these areas of vulnerability, the resumption of regional trade also evokes concern about the large portion of urban population dislocated and alienated from the agricultural economy as a result of the conflict. Whereas the agrarian population is able to consume what it produces, the urban segment of society is now divorced from the land must rely upon the market to access its food supply. As explained in the section on fragility, this segment includes a majority of urban youth including ex-combatants and former child soldiers, most of whom are unemployed or under-employed. For this reason GOSL is particularly attuned to the heightened vulnerability to poor urban youth to rising food prices, especially that of rice. The periodic bans on cross-border trade of rice and palm oil exports are thus likely motivated by a desire to prevent food scarcity and ensure that price rises in staple commodities do not become a tinder box to re-ignite discontent. While there is irony in this stance, given that it conflicts with the policy impetus of infusing subsistence agriculture with commercial instincts that respond to market forces, there is a simultaneous sense of responsibility of government reflected therein, reflecting genuine concern by government for the welfare of its poverty-stricken youth. GOSL apparently faces a trade-off and, to date, it acts on belief that stability is the greater public good. The solution for overcoming the vulnerabilities to informal cross-border trade could lie in investments that help to formalize trade flows in the sub-region, making it possible to monitor exchanges and facilitate it through legal channels. The themes of extracting greater returns from engagement in trade will be pursued in Chapter Two, as will the greater downstream potential of the communications sector as well as the mining sector.

While significant "building blocks" of national policy and governance work have been achieved in the nine years since the end of Sierra Leone's conflict, it is nonetheless evident that Sierra Leone and its neighbors are no longer on a level playing field with leading Sub-Saharan African nations. Moreover, it is clear that the legacy of conflict in many countries of the coastal fringe means that Sierra Leone cannot substantially alter its investment climate in isolation. Membership in ECOWAS, active participation in REC initiatives and collaboration with neighboring states through the Mano River Union can help to overcome these disadvantages. Though aspects of regional integration have a bearing on Sierra Leone's national policy environment, more could be done to produce greater benefit and this theme is pursued in the section which follows.

# 6. Why Sierra Leone should engage more in regional integration

Previous sections in this chapter have identified how Sierra Leone's recent history of conflict and its status as a recovering fragile state have caused the nation to focus intently on domestic concerns, prioritizing its Agenda for Change on actions that will alleviate domestic poverty. This includes an emphasis on agricultural sector productivity plus electricity and transport investments that will support growth. In retrospect, it is clear that Sierra Leone began the new millennium severely behind many other ECOWAS states with respect to policy frameworks. While other states have been able to work on converting comparative advantage to competitive strength, Sierra Leone has been obliged to pause and replenish its landscape of policy frameworks to guide the country forward. While significant "building blocks" of national policy, legislative and institutional reform have been achieved in the nine years since the end of conflict, it is nonetheless evident that Sierra Leone and its neighbors are no longer on a level playing field with leading nations in Sub-Saharan Africa. What can be done to close the gap between the fragile states along the Southern Coastal West African fringe and countries continental leaders? Must it be assumed that "once behind, always behind"? Or, might there be a means whereby the fragile fringe could achieve more rapid progress and, given time, catch up or move ahead on the development curve? There is no single answer, but there is little doubt that greater integration between Sierra Leone, its neighbors and the larger region would help. This section therefore takes a deeper look at how regional cooperation and integration could achieve greater or faster benefits than a strategy of pursuing development alone. It examines:

- how cooperation in managing threats could help to improve stability across the region;
- how coordination in environmental protection and forest management systems could maintain positive externalities of climate stability which benefit the larger region and avoid negative consequences from further deterioration of the natural resource base of the Upper Guinea forest ecological zone;
- how growth cluster approaches can extract greater synergies and economic returns from productive activities such as mining and trade;
- how collective sub-regional effort at reputation management can help to convert the region's reputation and succeed at attracting larger flows of FDI;
- how process harmonization and sharing of information can introduce greater efficiency in economic transactions; and
- how investment in infrastructure networks and research capacity can deliver economic benefits of scale as well as greater stability and reliability of service.

Each of these factors contributes to the assertion that Sierra Leone should engage in regional integration on a broader scale.

## COOPERATION TO MANAGE REGIONAL THREATS

Smuggling, drug trafficking and illegal fishing are threats to stability that affect Sierra Leone and its neighbors. As noted earlier, continued smuggling of artisanal diamonds renders the sub-region vulnerable to money laundering and, thereby, to corruption, the financing of terrorism or civil unrest. In addition, all of the States are vulnerable to the drug trade which continues to try and establish operations in ECOWAS. It is particularly noted that traffickers are thought to have penetrated the off-shore islands of Guinea Bissau as they lend themselves better to clandestine operations. These problems demand improved border control which, in turn, requires multi-national cooperation. This in turn demands real time sharing of information to track the travel and immigration patterns of individuals suspected of engaging in criminal or threatening activity. One excellent tool for this will be the proposed wide area VPN (ECOWAN) for ECOWAS government officials backed up by REC databases. Through this medium, governments can exchange information which is appropriate to share for immigration purposes between States but which must otherwise remain private and secure. This will help participating governments to better implement ECOWAS' vision of encouraging the free and safe movement of people and goods within the region. The other threat of illegal fishing by foreign trawlers requires coordination in the monitoring of the EEZ in the ocean where terrestrial borders are not applicable. Precisely because of this, it is fairly easy for trawlers to move from one country's zone to another's and thereby avoid detection and enforcement of regulations. Yet, over-fishing and stock depletion reflects an opportunity loss for the entire region, so multi-state coordination in ocean patrols, detection and enforcement will make each State more effective in countering this threat as well. Better communications networks and sea-worthy patrol vessels will help with this effort. GOSL might find its efficacy improved if the Joint Maritime Committee which currently coordinates actions of eight national institutions charged with ensuring maritime protection and fish stock preservation were to establish inter-regional links much like has already been done in fighting crime through the Trans-National Organized Crime Unit.

## COORDINATION TO ADDRESS ENVIRONMENTAL EXTERNALITIES

Sierra Leone and its Mano River Union neighbors hold the remaining landscape within the Upper Guinea Forest Ecosystem which is vital to

the climatic and rainfall patterns in the region. An impact on the natural resource base in one country will directly affect the neighboring country and, through knock-on effects of climate change, the ECOWAS region at large. A change in rainfall patterns in the MRU region could accelerate climate change, potentially increasing the vulnerability of landlocked countries to a change in water flow through key regional river systems. Because of these direct impacts and externalities affecting the region, it is important to take measures to protect habitat and prevent the loss of biodiversity. This requires a trans-national approach to conservation as the problem cannot be managed adequately by a single country. For this reason, the Mano River Union has proposed a cross-regional Forest Ecosystem Conservation Program. This initiative has gained endorsement of the member states and they should be strongly encouraged to move ahead with this initiative as there is every reason for the MRU to take a regional approach to natural resource preservation.

## OPPORTUNITIES PRESENTED BY GROWTH CLUSTERS

By taking its time to develop an industrialization strategy that views the potential gains to the nation of mineral transformation, Sierra Leone may have the opportunity to tap its mineral inheritance in a manner not yet realized by other ECOWAS countries. Yet, Sierra Leone cannot act alone to tap the full potential of its mineral inheritance.

The region has extensive trans-boundary mineral deposits and historical problems of inter-state smuggling mean that development of the minerals sector are best tackled as an integrated strategy between MRU countries. Regional challenges include the need for coordinated fiscal, legal and regulatory regimes as well as cross-border infrastructure investment which can support the development of mining corridors and associated service clusters.

## THE REWARDS OF REPUTATIONAL RECOVERY

Sierra Leone and Liberia have both worked hard to recover from their respective eras of conflict and each is striving to make progress at improving their respective business climates to attract greater FDI. Sierra Leone has the specific ambition to regain its previous market position as a holiday destination for the European tourism industry and Liberia has been successful at gaining EITI certification as a basis to sustainably revive the forestry industry. Yet, it should also be recognized that the tarnished image of trade in blood diamonds and repeated bouts of instability accrues not to a single country, but to the region.

Concerns about contagion from instability and security of investment would be better addressed if the MRU states work in a concerted fashion to re-brand the region as a whole. This is particularly important given the recent political upheaval in Ivory Coast. To gain the trust required to precede substantial foreign capital flows from private and MDB sources, it will be much more powerful if reputational recovery could be achieved on a collective basis across the sub-region. While the MRU Secretariat has a role in working to mitigate and prevent conflict within the union, a concerted external communications campaign might also be warranted and is offered for consideration to MRU member States.

## EFFICIENCY GAINS FROM HARMONIZED PROCEDURES

There are numerous examples which could be provided to illustrate how procedural harmonization with ECOWAS regulations will improve the efficiency of transactions. Trade is a key sector where efficiency gains could be made through harmonization, including financial payments systems, transport corridor management systems, sanitary and quarantine systems and cross border customs controls. This analysis selects electronic payments system and convergence to a common currency as illustrative cases which bear emphasis.

The absence of effective payment mechanisms is a major impediment to cross-border trade and this is particularly the case between Anglophone and Francophone countries. Transporters are often obliged to carry large amounts of cash in multiple currencies in order to carry out their business. Measures to institute cross border payment systems that facilitate MRU trade would therefore address a major impediment to the efficiency and environment for trade. In 3 to 5 years, the Bank of Sierra Leone expects to have the capacity to provide oversight over a new generation payments system enabling electronic payments instruments, such as credit cards and ATMs for retail transactions and facilitating cross border trade and financial transactions. With anticipated assistance from development partners, Sierra Leone will participate in a regionally oriented program to design and introduce a harmonized Real Time Gross Settlements system to facilitate eventual regional integration. An automatic clearing house may be introduced when the volume of transactions make it cost effective. Sierra Leone has not yet met the macroeconomic convergence criteria for the WAMZ single currency but a regional grant from an MDB will finance improved payment systems in Sierra Leone, the Gambia, and Guinea to further this agenda.

Meanwhile, the MRU offers an appropriate forum in which to nudge member state Liberia to join a unified monetary management system. The formation of WAMZ slated for 2014 and the adoption of the ECO as a common currency will improve the conditions for trade between Sierra Leone and Guinea. Ironically, however, Liberia is not a member state of the West Africa Monetary Union and if its current independence policy remains in effect, Liberia and Cape Verde will be the only ECOWAS states retaining monetary independence when the two West African monetary zones merge and create a single currency for the economic community in 2020. It is likely that the benefits from currency harmonization will emerge after a period of greater involvement in promoting cross-border trade.

## BENEFITS OF SCALE AND STABILITY FROM REGIONAL RESEARCH AND INFRASTRUCTURE

When major investments are approached from a regional instead of a national level, a country can gain two distinct but valuable types of benefit—economies of scale and the stability of back-up capacity. Because infrastructure investment is, by its capital intensive nature, prone to delivering lower unit costs for larger scale installations, it makes sense to pursue infrastructure investments at larger scale than might be affordable for a given nation. Investments in power generation are the epitome of this phenomenon and, according to PIDA, the fastest, cheapest, most secure and effective way for Sierra Leone and all of ECOWAS to address the continued electricity deficit is to move forward with determination in creating and participating in a regional market for energy trade. Not only does participation in WAPP offer participating countries access to lower cost electricity, it provides better stability in the supply of power due to different peak usage periods across a broader region.

Chapter three presents the business case for considering a corridor approach to mineral sector development whereby Sierra Leone could, together with Guinea and Liberia, take advantage of commonalities in mineral endowment to develop rail, port, power and roads infrastructure that could provide a better investment environment to private sector entrants. By working together, the nations could move more quickly from an enclave-extraction mode of development to downstream introduction of transformation and industrialization.

The case of regional cooperation in agricultural research is worth highlighting as this has been a success story with respect to the New Rice for Africa. As far back as 1971, the countries in West Africa joined together to assist in the development of rice varieties to contribute to the improvement of the rice supply in the region. The West African Rice Research Association (WARDA) is the major rice oriented research institution in the region. Since that time WARDA has managed to develop stable and fertile progenies from inter-specific crosses between Asian rice and African rice, called the New Rice for Africa (NERICA). Farmers growing NERICA rice varieties harvest their rice during the `hunger periods' when prices are relatively high. NERICA yields are more than 1.5 MT/ha per hectare under farmers' conditions where no fertilizers are applied compared to less than 1 MT/ha for local varieties and other rice varieties currently being used by smallholder farmers. Apart from early maturing and high yielding characteristics, NERICA varieties are pest and disease resistant, acid tolerant, weed competitive and able to withstand drought and other stressful field conditions. Agricultural research is a costly endeavor but it is one which yields great rewards. To the extent that it can be undertaken on a regional basis, the cost to each country is reduced and the potential rewards are improved. As Sierra Leone makes further progress in the realization of key multi-national projects such as regional ICT infrastructure or West African power transmission, the country will continue to witness the added advantage of membership in regional organizations and cross-border investment which promotes economic integration.

## SIERRA LEONE'S ASPIRATIONS FOR AND EXPECTATIONS FROM REGIONAL INTEGRATION

This section has identified that GOSL is not indifferent to regional economic integration but is selective in what it prioritizes and how it prioritizes participation in regional policies and programs. Nonetheless, government authorities express a consistent desire to strengthen ties within the region and especially within the MRU economic community. The following aspirations for further progress in sub-regional economic and infrastructural integration have been expressed:

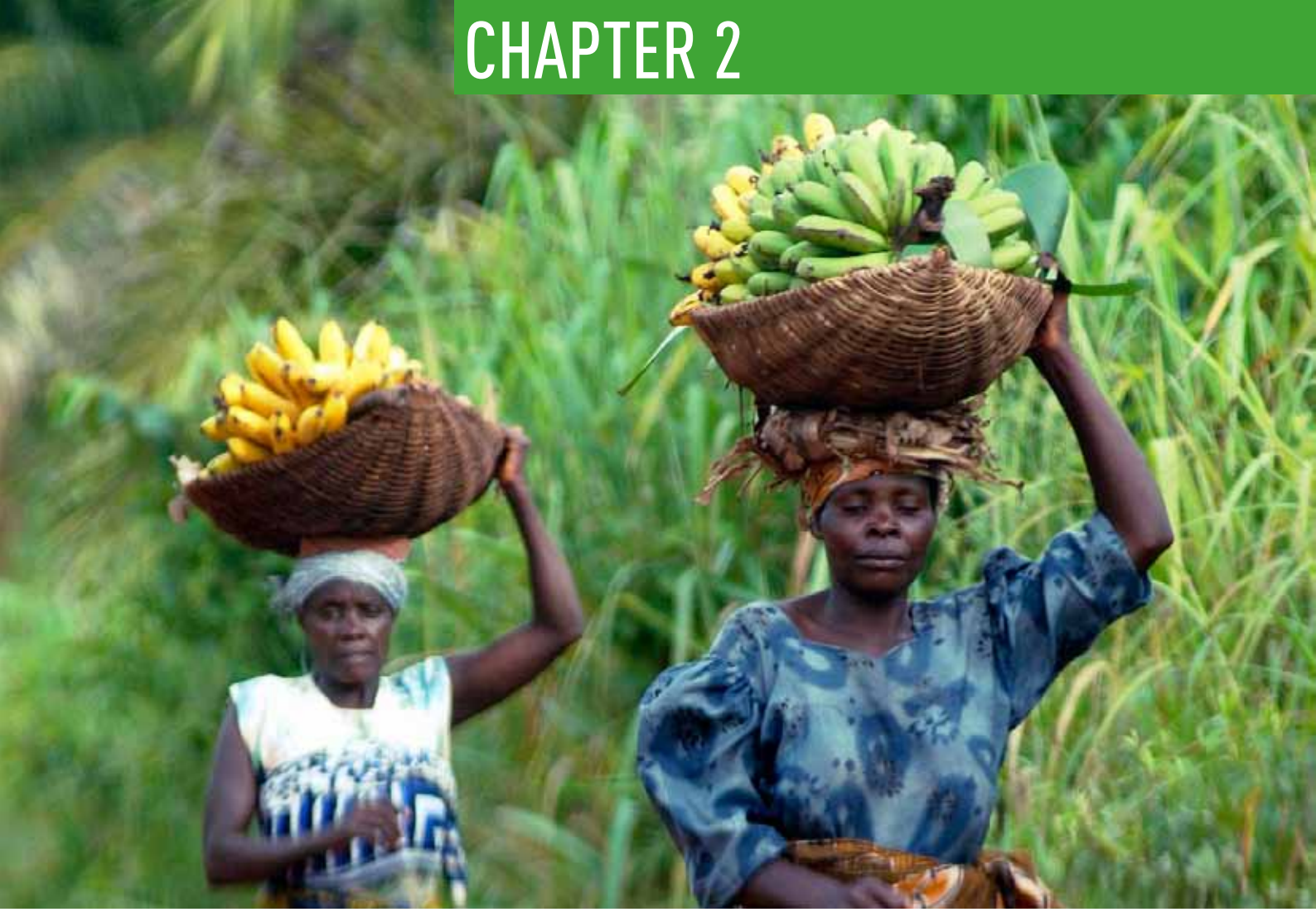
- The MRU needs to become a stronger institution and it should be vested with greater trust and capacity to identify and implement an integration agenda with the backing of political leadership in the member states.
- It would be beneficial to expand the current cross border cooperation program sponsored by MRU under the ECOWAS umbrella to go beyond human trafficking and the movement of arms and drugs across borders. If it were expanded to focus on reducing the non tariff barriers to trade and advance the placement and investment in common customs facilities and harmonization of procedures, all states would gain.
- Sierra Leone is a willing participant in the West African Power Pool and is as keen on the development of a regional energy supply market as it is to develop its national hydropower generation. It is willing to be either supplier to or importer from WAPP, as long as the first priority of acquiring energy to drive growth is achieved. With the discovery of gas reserves within Sierra Leone's Exclusive Economic Zone, the country is also keen to become a participant in the West African Gas Pipeline.
- Sierra Leone would like to encourage ECOWAS to think in terms of developing enhanced "mining corridors" and it would seek to participate in this arena for the future.

Taken as a whole, it is clear that Sierra Leone is preoccupied with domestic concerns, and that governance time and attention is consumed with these priorities. Nonetheless, the country sees extensive benefits which could be gained from a more aggressive regional integration agenda and is willing to take this forward as long as an optimum balance can be maintained between regional projects and immediate domestic needs. Where national and regional interests can be served simultaneously, the interest of Sierra Leone will be particularly high. These themes are explored further in chapter 2 ■

CHAPTER 2

# LOOKING AHEAD: PROMISING AREAS OF GROWTH FOR SIERRA LEONE

# CHAPTER 2



# LOOKING AHEAD: PROMISING AREAS OF GROWTH FOR SIERRA LEONE

Chapter two turns to the future and takes a deeper look at promising areas which can offer inclusive growth. Key insights and conclusions from the analysis undertaken in chapter 1 and which are relevant to chapter 2 include the following:

- The analysis of fragility identified that contributing causes of Sierra Leone's decade of conflict included poverty, poor governance, exclusion and inequality, especially between the urban elite and the rural poor. The nation remains vulnerable to several threats including the presence of a large, urbanized population of unemployed youth, illicit traffic in drugs, corruption, a continuation or perception of urban-rural inequality, insecurity of food supply (especially rice) and potentially contagious conflicts in the region. Measures to reinforce national stability and mitigate threats to political stability should be prioritized in selecting development strategies and infrastructure investments for the future. It is also essential that GOSL remain vigilant in maintaining macroeconomic stability as this represents another dimension of stability of great importance.

- As a recovering nation-state, Sierra Leone has been obliged to focus internally over the past decade. That focus has been on economic recovery and poverty reduction with an eye to reducing food insecurity, generating jobs for its large unemployed youth population and other measures that will reduce the disparities between citizens residing in the capital versus those living in the rural interior.

- The economy hit bottom in 2000 after years of conflict and has shown encouraging signs of recovery. At the same time, output is only just at the stage of regaining the real level of GDP per capita produced in 1980 and the annual rate of growth is

in decline. This is discouraging and it emphasizes the need for a "second wind" to drive economic growth.

- Sierra Leone's trade sector exhibits a dichotomy between favorably sanctioned trade flows with developed countries and less-condoned engagement in cross-border trade. Statistics are kept on global trade but are rarely captured with respect to regional trade and current domestic capacity to facilitate trade is extremely low. Consequently, regional trade remains largely informal and tends to be associated with smuggling, corruption, money laundering and trafficking in drugs.

- Concerns about food security causes officials to frown upon the export of locally produced rice and palm oil even though these products are in high regional demand. Though Sierra Leone aspires to become a surplus producer and supplier of rice into ECOWAS, the country has not yet achieved self-sufficiency in production and rice must be imported to meet the balance of demand. GOSL is concerned by the fact that a large swath of its population has been dislocated from the agrarian economy and, with few formal sector jobs, they have a heightened vulnerability to rising prices in staple foods.

- Africa sits at the bottom in the global rank of infrastructure by continent and Sierra Leone is in the bottom tier therein. Government is very much seized with the need to redress this situation and is making infrastructure recovery a priority focus of domestic management. The review of productive sectors of the economy reinforces the clear conclusion that insufficient and poor quality infrastructure is a major constraint to current performance.

- Sierra Leone and its neighbors are no longer on a level playing field with leading Sub-Saharan African nations. Moreover, the legacy of conflict along the coastal fringe means that Sierra Leone cannot substantially alter its investment climate in isolation. Active participation in MRU and ECOWAS can help to overcome these disadvantages. The convening power of the MRU could be helpful for organizing closer cooperation between the States in the implementation of ECOWAS policies and regional integration initiatives.

- Sierra Leone has embarked upon a wide agenda of policy renewal, striving to update its policies, legislation and institutions for the new millennium. While significant progress has been made, more remains to be done, especially within infrastructure sectors whereby an initial phase of operational recovery must now be followed by more substantial sector reform to encourage open access (ICT), make the sector attractive for PSP (power and roads) and build in safeguards to ensure that new investments will be maintained. The area of agricultural policy is well advanced with emphasis in the CAADP having been placed on encouraging a paradigm shift by smallholders from subsistence to commercial agriculture. However, the sphere of trade policy is incomplete with an absence of declared policy and strategy with regard to regional trade. Overall, the emphasis of PRSP II on agriculture (over mining) as a key contributor to growth and generator of poverty-reducing livelihoods has been the appropriate area of focus and it will remain a relevant in the future, especially as long as there remains a gap between performance and potential.

This chapter turns to the future and takes a deeper look at promising areas which can offer growth taking into account domestic factors and plausible developments in neighboring countries.[1] It strives to identify those promising areas which can generate the "second wind" of growth which Sierra Leone now urgently needs. The analysis builds in a regional perspective and takes into consideration factors which favor unilateral national versus inter-dependent regional action. It also looks at Sierra Leone's profile with respect to comparative advantage and considers the measures needed to convert these to greater competitiveness. The intention is to identify those sectors where the gap between current versus potential performance is so pronounced that, if addressed, they would have a material impact on GDP, employment, "inclusiveness", poverty reduction and other important variables affecting the stability and cohesion of the nation. Where such potential is high, this chapter examines alternative growth options which could be achieved if binding constraints, including those pertaining to infrastructure, could be relieved. Three growth development strategies are explored in depth, including those of the crops sector stimulated by an accent on trade, the ICT sector and the industrial mining sector. This will permit presentation of plausible infrastructure action plans in chapter 3, each one mapped to the growth options presented here.

1 These are not meant to be bold new discoveries heretofore undiscovered by the Government of Sierra Leone. Indeed, Government's own development plans are an instructive point of departure and this exercise extrapolates on them by introducing the added perspective of regional integration and the rationale for region-wide investment.

# 1. Inclusion of a regional integration perspective in the look ahead

Before narrowing the criteria used to select particular growth options, this section revisits themes and insights identified in the diagnostic of Sierra Leone's current condition to ensure that a regional dimension is introduced into the analysis. It considers the degree of influence which a nation state can independently exercise to determine its future prosperity. It also considers what measures will be essential to convert Sierra Leone's comparative advantages into a competitive position and situates the comparative advantages of Sierra Leone in a broader regional context. On balance, this analysis argues for continued emphasis on measures that increase Sierra Leone's stability leveraged by complementary measures that promote regional integration. Concurrently, the report advocates for inclusion of a regional component within a next generation of national development and poverty reduction plans.

## NATIONAL INDEPENDENCE AND REGIONAL INTER-DEPENDENCE

The discussion in chapter 1 of Sierra Leone's stability profile and vulnerabilities to conflict drivers led to a finding and a suggestion. The finding was that national stability and regional security intersect; even if a single country performs well in delivering progress and prosperity within its national borders, peace across the sub-region is needed to make each nation ultimately more secure. Taking into account Sierra Leone's recent decade of peaceful progress plus the political evolution in Guinea, this led to the suggestion that the present may be a promising time to shift from an emphasis on national independence to sub-regional integration. This is the first perspective—a stability perspective—from which the theme of regional inter-dependence arose.

The review of the socio-economic profile of Sierra Leone and its neighboring states revealed that conflict and poor governance have caused the entire neighborhood of nation-states to lose out from a decade or more of better progress achieved by other ECOWAS countries. Sierra Leone, Guinea, Liberia and Guinea-Bissau are not just "fragile states"; they form a "fragile continental fringe"[2]. Not only are they behind, but their proximity to each other means they do not have a stable anchor or growth pole next door which can be leaned upon to pull them out of their current situation. Instead, they will need to rely on each other. This is the second perspective—a socio-economic perspective—from which the theme of regionally co-determined prosperity arose.

It is therefore useful at this juncture to reflect on the general question of independence versus inter-dependence. In a previous era, "independence" represented a largely political aspiration whereby African states sought to achieve liberation from political and economic domination by colonial powers. Some states (like Kenya) had to lead armed conflict to achieve it. Other states (like Guinea, which voted a referendum to secede) had to deal with the subsequent consequences of broad-based shunning by western nations in a bi-polar world. In this context, it seems natural that all new African nations were preoccupied in the post-independence period by the priority of self-determination. The climate for exploring regional integration was not right. But now the emphasis has changed. Indeed, the vision for regionally determined prosperity is being led by ECOWAS and its member nations. As Sierra Leone reflects back on its fifty years of independence, it will likely also look forward and wish for a next century in which numerous benefits of economic inter-dependence are realized, still balanced by political self-determination. Realization of such an aspiration must start with better appreciation of what priorities can be tackled alone versus those which require collective action. Table 2.1 below highlights a limited sub-set of strategic GOSL policy goals elucidated in chapter one and considers the extent to which they can be achieved unilaterally or they require coordination with other states.

### Box 2.1: ECOWAS Vision 2020

"To create a borderless, peaceful, prosperous and cohesive region, built on good governance, and where people have the capacity to access and harness its enormous resources through the creation of opportunities for sustainable development and environmental preservation."

While this does not attempt to be comprehensive, it makes clear that some policies are more achievable within a national sphere than others. The best contrast to illustrate this point might be crop production versus marine resource management. Whereas Sierra Leone can reap the gains from many types of national initiatives it will implement to improve the conditions for crop production—whether that be via improved input supply, better density of feeder roads, improved post-harvest storage or the like—it could introduce similar improvements to the marine fisheries sector without equivalent returns. Unless neighboring states act in equal measure to stem illegal and unsustainable fish harvesting from their exclusive zones, fish populations in Sierra Leone's waters will continue to decline. Accordingly, Sierra Leone has greater unilateral potential to maximize its crop production potential than it does its fisheries catch. This does not give one policy more merit than the

2 Though it experienced and recovered from conflict in the first decade of the millennium, Ivory Coast has not heretofore been considered a "fragile" state so it is not included in this list, but it is recognized that it is rapidly moving in that direction unless current circumstances rapidly change.

**Table 2.1: Degrees of Independence vs. Inter-Dependence for Achieving Strategic Policy Goals**

| Strategic Policy Goals | Achievable by Unilateral Sierra Leone Action? | Achievable by Coordinated Regional Action? |
|---|---|---|
| **Maximize crop production output** | To a high degree | Regional research will assist |
| **Revitalize tourism industry** | To a high degree | Peace in sub-region favorable |
| **Expand agricultural exports** | To some degree for extra-regional trade | Coordination essential for inter-regional trade |
| **Achieve reduction of national poverty** | To a significant degree | Yes |
| **Achieve national peace and stability** | Can avoid local re-ignition of conflict | Essential to avoid importing external drivers of conflict |
| **Improve climate for private investment** | Diaspora,--yes. FDI less likely | Large scale FDI more likely |
| **Preserve forest cover and ecology** | No | Yes |
| **Sustainably manage marine resources** | No | Yes |

other; it simply means that a marine resources policy must be implemented within a framework of multi-state coordination to be effective. Even where a state exerts a high degree of unilateral control, coordinated action can almost always deliver added benefits, such as, for example, when economies of scale are achieved by conducting agricultural research at a regional level to determine better performing crop varieties.

Before leaving the theme of independence versus inter-dependence, it is worth revisiting Sierra Leone's strategic policy goal of attracting private sector investment. Sierra Leone's PRSP 2 expresses the clear aspiration that private sector led growth will eventually drive the economy and concludes that a key role of government is therefore to improve the business climate, making it attractive for the entry of private capital. While Sierra Leone can, and is, making excellent strides in improving its "Doing Business" scores, making it a relatively better investment destination than lower ranked countries, it cannot escape the fact that external perceptions are influenced by the reputation of its larger neighborhood. Where private investment is needed for agro-industrial processing or tourism industry development—areas where trust can be placed in the country's national governance capacity-- unilateral improvements in business climate can be expected to stimulate private investment. This may be particularly helpful in eliciting private investment by Sierra Leonean nationals, immigrants and the Diaspora. Where there is a need to generate highly material sums of FDI, backed by international capital markets as is the case for national or cross-border infrastructure, there is no doubt that the reputation of the entire fragile fringe zone will continue to exert an impact on investor perceptions. This explains why, therefore, it is important for the entire sub-region to advance together and appear to be collectively "open for business." This would be particularly true for Sierra Leone to attract, for instance, the type of foreign investment that will bring mineral transformation capacity into the country.

## CONVERTING COMPARATIVE ADVANTAGE TO COMPETITIVE ADVANTAGE

The review of Sierra Leone's current status in chapter one revealed the nation's natural factors of endowment and brought to light several aspects of comparative advantage. Table 2.2 below makes clear it is no longer enough for a nation to rely upon its attributes of comparative advantage, but that the imperative in the world today is to convert natural endowment into competitive advantage. Physical endowments, geographic location and cultural attributes must be accompanied by favorable national and regional policy frameworks, strong institutions, a hospitable business climate, a vibrant private

**Table 2.2: Actions Required for Converting Endowment into Competitive Advantage**

| Factor Endowment Comparative Advantages | Conversion to Competitive Advantage |
|---|---|
| **Fertile Land** | 89% of arable land not cultivated. Expansion of area and intensification of productivity via technology, inputs, storage and adoption of innovation is required to gain competitive advantage |
| **Tree Crops suited to climate** | Achieve value add from existing crop exports via standards upgrading, certification, packaging, value added processing. Achieve other gains via diversification. |
| **Marine Resources in EEZ** | Stem leakage from illegal industrial fishing sector and enhance Sierra Leonean participation in sector. Public investment to encourage catch handling on shore. |
| **Mineral Resources** | Reliable power is essential if sector is to become less enclave and extractive oriented and able to add more value through transformation to launch industry |
| **Coastal Location** | Need to make proximity to Freetown port attractive to Bamako and Eastern Guinea production centers by establishing roads, trade corridor and transit facilitation. Otherwise they'll stick to current choices of using Abidjan, Tema or Conakry ports. |
| **Naturally Deep Harbor** | Need to convert port into efficient operator, well equipped and able to handle bulk mineral and agricultural commodities as well as container traffic. |
| **Natural Hydrology** | Harness for the benefit of irrigated agriculture & intensification of production. Gain advantage through development of lower cost river transport systems. |

sector and conditions that offer favorable returns to investment. This observation is equally applicable to Sierra Leone.

The fact that comparative advantage does not equate to a competitive strength is most clearly illustrated by the fact that Sierra Leone has the best natural harbor in the region, yet one of the most under-utilized ports along the entire West coast. The realism here is that Sierra Leone is behind on the "conversion" curve. Several ECOWAS states are ahead on developing competitiveness and BRICS are even further ahead in beginning to embrace innovation-led growth. The encouraging aspect of this table is that there is a great deal of opportunity for Sierra Leone to achieve higher economic performance as the nation systematically addresses its conversion challenges across all of its sectors.

At the same time, it is instructive to consider Sierra Leone's endowment factors within a regional context as presented in Table 2.3. This table is read from left to right, with Sierra Leone's traditionally recognized factors of comparative advantage spelled out in the left-most column and those to the right identifying other countries' relative equivalence or difference in the same endowment factors. This table reveals that, in fact, Guinea, Sierra Leone and Liberia share many of the same natural endowments and, as such, their advantages stand more in comparison to further distant ECOWAS or overseas trading states than in distinction from each other.[3] Thus, for example, the oft-cited advantage of being a coastal country is only an advantage relative to landlocked African countries and external trading partners, but not to each other. Nonetheless, there are some notable differences between them and these can help to inform or shape different development strategies, helping to select "in" or weed "out" sectors which merit relative emphasis in the near to medium term.

For instance, the relative advantage of each MRU country in terms of land use argues in favor of relative diversification with Sierra Leone specializing in rice, Guinea in livestock and Liberia in sustainable forestry. Likewise, Guinea's relatively greater hydro-power generation resources identified in the accompanying text-box argues in favor of situating major hydro-generation capacity in that country while complementary investments are made to develop a regional energy market through investment in a regional transmission grid. Given an overall scarcity of investment capital, Sierra Leone might consider whether it would gain better returns by prioritizing participation in regional transmission through WAPP and build-out of the national grid before investing in the addition of more national generation capacity. Also, the generalized presence of mineral resources across multiple countries favors a strategy of developing a mining corridor which can, through greater scale, attract the investment needed to introduce mineral transformation in the sub-region. This common endowment of natural advantage allows for a more ambitious multi-national development strategy than might otherwise be feasible.

While this section has identified the merits of inter-state coordination, it also brings home the fact that a recovering state may be justified in prioritizing attention to sectors where it can exert a greater degree of control, weather and other external factors notwithstanding. This logic serves to confirm that Sierra Leone's emphasis on revitalizing agricultural production and productivity was not only suitable for the 2008-2012 PRSP timeframe, but it will remain valid as long as the gap between performance and potential remains high. Even so, there is a clear benefit to policy planners from considering both national and regional factors when formulating development plans both from a potential competition and a potential benefit perspective. This argues, as was presented in chapter one, in favor of a single common

## Box 2.2: Comparative Regional Energy Supplies

| | Crude Oil, Millions MT | Natural Gas Millions $M^3$ | Hydro Potential MW |
|---|---|---|---|
| Benin | 21 | 2,800 | 300 |
| Burkina Faso | 0 | 0 | 900 |
| Guinea | 0 | 0 | 6,000 |
| Guinea-Bissau | 0 | 0 | 60 |
| Liberia | 0 | 0 | 2,000 |
| Nigeria | 3,300 | 3,400,000 | 10,000 |
| Sierra Leone | Requested | Requested | 1,000 |

Source: African Development Indicators data uses most recent data available for each country.

### Table 2.3: Inventory of Comparative Advantage of Sierra Leone and Neighboring States

| Comparative Advantages Sierra Leone | Comparative Advantages Liberia | Comparative Advantages Guinea | Landlocked Countries to North |
|---|---|---|---|
| **Fertile Land for crop production, especially rice** | Equivalent but forestry relatively stronger | Equivalent + more territory suited to livestock | Livestock & Groundnuts are relative strengths |
| **Abundant rainfall** | Equivalent | Equivalent+dry ecology zone | Relative weakness |
| **Tree Crops suited** | Same + Rubber | Equivalent to SL | Ahead on cashew crops |
| **Marine Resources in EEZ** | Equivalent | Equivalent | None; fresh-water only |
| **Mineral Resources** | Also present | Likely greater qty bauxite | Also present |
| **Coastal Location** | Same | Same | Landlocked |
| **Naturally Deep Harbor** | Less good | Less good | NONE |
| **Naturally good Hydrology** | Also good | More hydro-power potential | Weaker |

3 This is not surprising given that they share a common geography despite distinct colonial histories which carved the territory into distinct nation states.

"regional development agenda" to be developed as an addendum to national poverty reduction strategies when the time comes for each country, including Sierra Leone, to prepare its next generation growth and poverty reduction plan. This could help the countries to consider how their difference endowment sets can be turned into collective advantage by enable specialization and diversification in the sub-region which can then feed into greater trade. It would also enable the countries to take a joint look at the long term infrastructure planning horizon to determine the types of network infrastructure that could ultimately be delivered on a larger scale with reduced unit costs to all participants through regional grids.

# 2. Criteria relevant to the selection of promising growth sectors

The analysis of fragility presented earlier makes it apparent that Sierra Leone must consider several dimensions beyond regional integration and comparative advantage in its approach to growth. This is evident in the Agenda for Change whereby due care has been applied to emphasizing pro-poor growth that will impact rural incomes as well as measures that enhance the conditions for stability. For these reasons, several criteria were considered for their positive or negative influence on the speed, quality and distributional aspects of growth before selecting sectors for deeper analysis in this report. These filter criteria deserve some preliminary explanation to interpret their meaning and explain their relevance. When applied to the productive sectors of the economy identified in chapter one, they help to reveal areas of greater promise where binding constraints addressed through better infrastructure, sound policies and reformed institutions together with an accent on regional integration can unlock better economic potential and performance. After describing each type of criteria, Table 2.4 applies them on a high to low scoring scale across all sectors to identify those to be set aside and select others as areas of relatively greater promise.

**Box 2.3: Filter Criteria for Selection of Promising Sectors**

1. Economic clout
2. Addresses a gap in potential
3. Delivers social inclusion
4. Enables economic diversity
5. Engages private sector
6. Achieves gains reasonably quickly
7. Enhances unity and stability
8. Fosters regional integration

## ECONOMIC CLOUT

A natural starting point is to examine the current contribution and recent growth performance of each sector to the economy to identify its present degree of "clout". Rather than focus on absolute contribution to GDP or rate of growth, clout is defined to include both concepts at once, share and growth rate. Together these have clout because they correlate with and can serve to generate livelihoods and job creation. Figure 1.2 in chapter one helped to identify sector contribution to GDP but its limitation was that it included all of agriculture as one sector. Tables 1.7 and 1.9 in chapter one disaggregated performance in the agriculture sector and served to identify that crop production has been growing much more quickly from a larger base than fisheries, livestock and forestry and has been contributing many more livelihoods. Table 1.7 further identified that transport and communications sector (aggregated together) out-paced the average national rate of growth rate; trade has performed just behind agriculture and tourism, mining and manufacturing have stagnated or contracted.

Taking both dimensions, Figures 2.1 and 2.2 (overleaf) plot growth rate over the prior year and absolute contribution to GDP to depict the current economic "clout" of Sierra Leone's principal sectors to the economy. The figures show the status at 2005 and 2008 to illustrate changes that occurred over recent years. Data for 2009 and 2010 were still provisional at the time of this analysis, so 2008 which was similar

**Figure 2.1: Economic Clout by Sector in 2005, Growth, % of GDP & Relative Size**

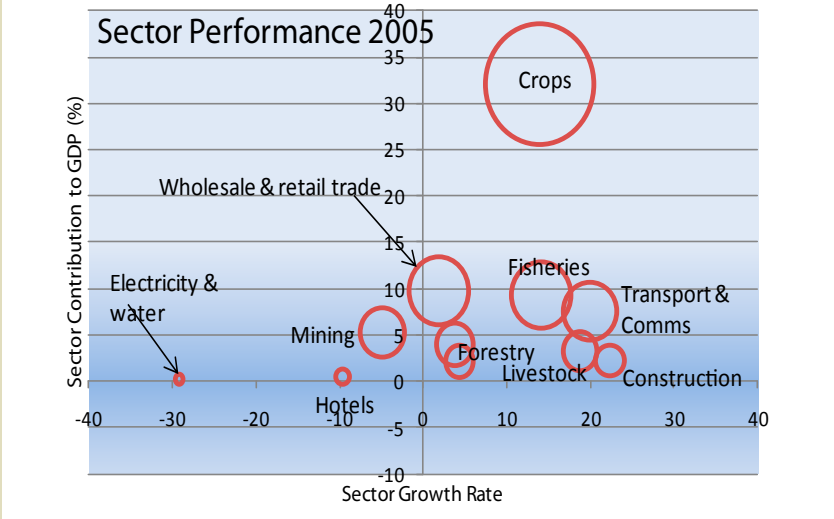
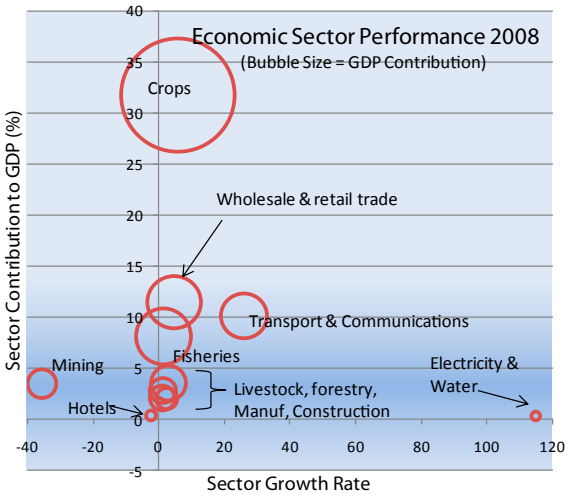


**Figure 2.2: Economic Clout by Sector in 2008, Growth, % of GDP & Relative Size**




enough to 2010 to be taken as a good proxy for a recent snapshot of the economic landscape. The bubble size in these charts corresponds to GDP contribution, making evident the relative size of each sector in the economy and their situation relative to the horizontal axis identifies whether a sector is contracting (negative growth) or expanding. Small changes to small sectors can produce dramatic reversals in performance as is the case, for example, of electricity and water sector which depicts negative growth of 29 percent in 2005, swinging to a year on year increase of 115 percent in 2008. This brings to light the impact of urgent investment taking place in the power sector and its reversal from decline to recovery. It also reveals that crop agriculture was a material contributor to the economy which grew significantly between 2005 and 2008 but was beginning to stabilize at a lower, positive growth rate by 2008. Meanwhile, wholesale and retail trade, fisheries, transport and communication are three other areas which can be considered to have high economic clout, while other sectors are making medium or low level contributions to the economy.

## GAP IN POTENTIAL

While economic clout is very helpful to establish the relative landscape of performance, its limitation is that it provides a backwards look in time which may ignore the future potential of a given sector. Especially where there are binding constraints that inhibit sector performance, current results cannot be taken as a predictor of future performance. The mining sector epitomizes the relevance of this filter insofar as current policy deliberately downplays mineral sector importance for stability reasons and the inadequacy of power, road, rail and port infrastructure combine to inhibit sector potential at making a more inclusive contribution to the economy. Tourism also offers the promise of greater potential relative to past performance and this stands in contrast to a sector like livestock which is rated as "low". Both ratings consider the sector's potential in terms of comparative advantage, recognizing that Sierra Leone is endowed with tremendous touristic beauty and that Guinea can be considered to have better climatic conditions for advantage in livestock production.

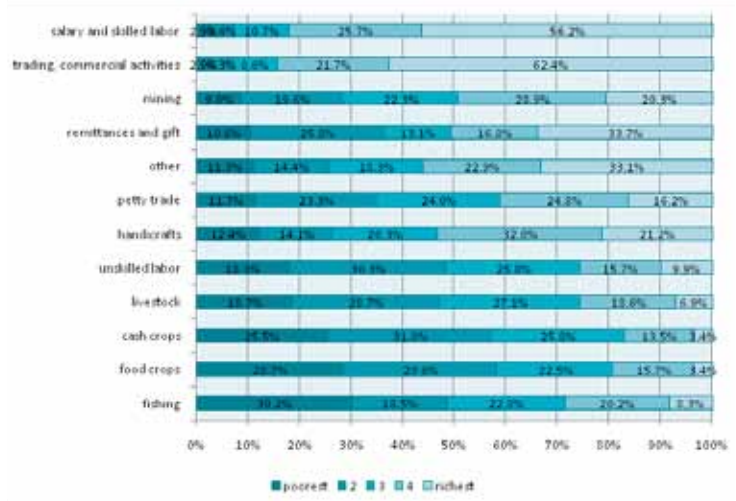
## INCLUSIVENESS WITHIN ECONOMY

This filter recalls that urban-rural inequality, poverty and alienation fueled Sierra Leone's decade of conflict and therefore looks at distribution issues in the economy. It blends a number of sub-elements to identify whether a given sector can be expected to deliver inclusion of poor or marginalized segments of the population, notably youth, women or the very poor.

Against this filter some sectors perform very poorly. For example, while the artisanal mining sector has traditionally supplied livelihoods to large numbers of young entrants into the workforce, the industrial mining sector offers hugely different terms of employment for formal sector jobs and the differences cause friction and discord between mining companies and their local communities. Industrial mining should be discouraged from developing enclaves on a fully self-sufficient basis. Instead, the industry should be encouraged to develop in a manner that creates more direct and indirect jobs, becomes more inclusive and is considerate of their impact on the local community. Likewise, the trade sector in Sierra Leone currently has an offensive exclusive trait whereby there is extreme concentration by foreign traders in the global trade in tree crop exports. This results in accusations of cartel-type exploitation, unfair economic transactions and resentment between farmers and traders. Expansion of trade to include greater cross-border trade and local nationals in the profession could alter this situation. In contrast, the fisheries sector performs well against the 'inclusion' filter because it provides livelihoods to one of the very poorest segments in Sierra Leone society and involves women in the preservation and marketing of dried fish to the interior population thereby empowering them and providing them with income.

Figure 2.3 tabulates the poverty dispersion across different livelihood segments in Sierra Leone and helps to understand the relative differences between economic sectors. It reinforces the conclusion, for example, that the relatively wealthier segments of society are engaged in mining, trading and formal sector employment. So, while it is important to elevate the earnings potential which can be gained in fisheries, food and cash crop livelihoods, it is likewise important to introduce a structural change in the mining and trade sectors to incentivize greater distributive effects to permeate.

**Figure 2.3: Cross-Tabulation of Poverty and Livelihoods in Sierra Leone**




Source: "The State of Food Security and Nutrition in Sierra Leone," World Food Program, March 2011

## ENABLES ECONOMIC DIVERSITY

The discussion on trade policy in chapter one identified the fact that Sierra Leone has too much concentration in trading partners and export products and in order to compete more effectively under forthcoming EPA and WTO sponsored trade regimes, the country must diversify its economic base and encourage greater specialization. Five sectors have been rated highly against this filter criterion for particular reasons. The mining industry could provide the basis on which to launch a manufacturing industry in Sierra Leone and the sub-region if the sector was encouraged to move towards transformation within the territory with more value being added in the local economy. It should be encouraged to develop in this direction (for inclusion and distribution reasons advanced above) and so is included because of its high potential in this regard. Trade, by definition, encourages specialization and diversification and this sector is directly supported by transport and communication industries which enable the same. Power supply is an essential ingredient to the downstream transformation of raw materials into semi or final products and is thus critical to releasing latent diversity. The same logic applies to the manufacturing sector. In contrast, fisheries does not offer huge potential for added specialization, whereas livestock and forestry sectors could offer modest diversification into hides, skins and leather products, furniture manufacturing or the like.

## ENGAGES PRIVATE SECTOR

Engagement of the private sector is included as a selection criterion given the GOSL vision of an economy fueled by private-led growth in the future. At first glance, all sectors are open to private sector participation, but it is also clear that some sectors appear more lucrative and attractive for private investment. This has become evident from the massive inflow of private investment in mobile telephony and could be expected to continue as that sector tackles the digital divide and creates conditions for expansion in internet service provision. Likewise, GOSL is particularly encouraging PSP in agriculture, notably tree crop plantations and irrigated rice production and the mining sector must attract FDI if it is to tap its greater potential.

## GAINS REALIZABLE QUICKLY

This filter criterion emphasizes that the country must maintain momentum in its pace of recovery in order to continue providing opportunity for its population. In this respect, some sectors are at a clear disadvantage. For example, tourism may have high potential and it offers good potential to generate jobs, but the sector must overcome a legacy reputation problem and rebuild its holiday brand from scratch. This will take time and there should be a modicum of realism on how rapidly the horrors of the conflict period will diminish in the memories of potential customers. In contrast, where research has produced an improved technology such as an improved variety of cashew or rice in the agriculture sector, one can expect gains to be made relatively quickly and this should gain greater priority as a consequence.

## ENHANCES NATIONAL UNITY AND STABILITY

Concern for national unity and stability is paramount and, in any case, all sectors should be developed with a strategy that seeks to enhance these conditions. One could assert that they trump all other criteria as, without stability, economic promise is irrelevant. But they can also serve as a triage factor considering how a given sector could make a specific contribution towards unifying the nation. It is clear, for instance, that the infrastructure and utility sectors have high potential in this regard because an improved road network and transport system can physically unite the nation and better communications bring people into contact across the territory. Improved power and utility services delivered to under-served areas could level the playing field with Freetown and deliver greater equality and satisfaction into the interior. There is, as usual, a continuum and contrasting performance against this criterion. This is where the sector presents an unusual degree of risk to the country if progress in that given sector caused these to materialize. Thus, for example, chapter one has made evident that cross-border trade is viewed with caution predicated on knowledge of the consequent risks of smuggling, criminality and corruption that could accompany an expansion of trade if not otherwise held in check. This example helps to identify that the criterion is not used so much as a pass-fail element for selection, but to inform the strategy by which a given sector's potential should be developed. The mining sector serves again to reinforce this point. The risks of exclusion and unequal distribution of economic benefits from further development of the mining industry

are completely unacceptable and must be avoided at all cost. But, fear about this risk is a good thing and it must be harnessed to ensure that the sector be governed in a manner to prevent resurrection of this kind of destabilizing risk.

## FOSTERS REGIONAL INTEGRATION

Much like the previous criteria, regional integration can be considered as relevant performance criteria for all sectors, but some offer higher propensity to deliver integration outcomes than others. A good example would be the trade sector where advances in cross border trade would need to be undertaken with deliberate intent to avoid the negative consequences of down-side risks. Thus, by requiring much greater cooperation and harmonization of policies, procedures and facilitation services, trading countries would be forced to directly embrace integration objectives in order to be successful. On the physical front it is evident that integrated or connecting investment in transport infrastructure plus network utilities for power and communications would deliver direct benefits to each participating economy.

## CONCLUSIONS FROM THE APPLICATION OF SELECTION CRITERIA

Table 2.4 now assembles these criteria and applies them to Sierra Leone's major productive sectors to identify those with greater relative promise for delivering poverty-alleviating growth in the future. The screening criteria have been applied to the breadth of economic sectors for which data was presented in Table 1.7 and Figures 1.2 and 1.3 in chapter 1 and on the basis of logic narrated above.

This methodological approach results in both direct and indirect selection of sectors of Sierra Leone's economy for consideration as high potential growth areas. Those sectors selected for direct consideration include:

- Agricultural crop production,
- trade,
- industrial mining, and
- ICT.

Those sectors selected indirectly by virtue of their connection to the chosen sectors include transport and communications plus electricity and water. Crop production will be evaluated not just for its intrinsic potential, but with particular emphasis on how trade can stimulate improved performance in that sector. While it is unrealistic to expect young people to return to rural areas and devote themselves to a farming livelihood via direct involvement in crop production, there is more chance that growth of trade will create opportunity for youth. Indeed, Sierra Leone's trade sector needs to change and lend itself better to entry by new participants in the profession. Recent survey work suggests that two fifths of the employed youth in Liberia and Sierra Leone were self-employed in the informal sector and trade is very much the nature of the skills that many of them gain. Consequently, trade is selected as a sector of promise by virtue of its links to agriculture and is thus considered in conjunction with crop agriculture.[4]

The mining sector selected for emphasis is the industrial mining sector because this is where there is considered to be most promise. This takes into account the fact that surface mining of an artisanal nature is in decline and considers that the greater benefit to the nation would be for the industrial mining sector to move beyond enclave style development. Industrial mining could become a stepping stone for transformative development of downstream industry and of multi-purpose infrastructure, especially if it is pursued on a cluster basis in conjunction with Guinea and Liberia. Together, these MRU states have great potential to introduce greater economic activity in their respective isolated interiors, particularly if they take a coordinated approach to the development of supporting infrastructure. The selection of mining together with a cluster development approach therefore results in the indirect selection of transport and power sectors through means of the investment packages implied in the associated action plans.

**Table 2.4: Decision Grid for Selection of Sub-Sectors with Greatest Promise for Sierra Leone**

| Criteria | Crops | Fisheries | Forestry | Livestock | Mining | Tourism | Trade | Transport & Comms | Elec & Water | Con-struction | Manu-facturing |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Contributes to GDP, Share & Rate** | H | H | M | M | L | L | H | H | L | L | L |
| **Addresses a gap in potential** | H | H | L | L | H | H | H | H | H | L | H |
| **Inclusiveness within economy** | H | H | M | M | L | H | L | M | L | H | L |
| **Enables economic diversity** | M | L | M | M | H | M | H | H | H | M | H |
| **Engages private sector** | H | M | L | L | H | H | H | H | M | H | H |
| **Gains realizable quickly** | H | M | M | M | L | L | M | M | L | L | L |
| **Enhances national unity & stability** | H | M | M | M | L | L | L | H | H | L | L |
| **Fosters regional integration** | H w/trade | M | M | M | H | L | H | H | H | L | L |
| **Rack-Up of Ratings:** | 7H, 1M | 3H, 4M, 1L | 6M, 2L | 6M, 2L | 4H, 4L | 3H, 1M, 4L | 5H,1M, 2L | 6H, 2M | 4H, 1M, 3L | 2H, 1M,5L | 3H,5L |
| **Decision to Include or Exclude:** | Select | Exclude | Exclude | Exclude | Select[1] | Exclude | Select | Select[2] | Select[3] | Exclude | Exclude |
| **H,M,L = High, Medium, Low** propensity to impact performance criteria | | | | | | | | | | | |
| [1]Industrial (not Artisanal) Mining Selected; [2]Communications selected; transport included indirectly;[3]Included indirectly | | | | | | | | | | | |

4 Youth Unemployment and Conflict in Africa: Evidence from Liberia and Sierra Leone, Kinyanjui and Mbatia, University of Nairobi, December 2010, pages 33-35.

The Transport and Communications sector selected for direct consideration is specifically that of ICT since it is the sphere which has demonstrated a robust response to sector liberalization to date and has tremendous potential to deliver a second wind of economic growth as a result of measures to expand internet penetration, cross the digital divide and connect Sierra Leone better with the region and the world economy. Concurrently, the type of infrastructure investment that will relieve the binding constraints to performance by the directly chosen sectors includes roads, power and irrigation and, as such, these sectors are indirectly included within the profiled growth options.

# 3. Sectors left aside as a result of the screening criteria

It is important at this juncture to explain why some sectors have been excluded from further analysis before proceeding to in-depth examination of each distinct growth option. The exercise has aimed to select a subset of sectors that might best respond to Action Plans that include infrastructure investment as well as accompanying measures on the policy and sector reform front. Because investment capital is always scarce, this analysis will help Government and development partners identify how they can best allocate assistance volumes to deliver the greatest possible results and economic returns on investment. This should not be construed to suggest that Government should, by any means, neglect the development of sectors left aside, but it might help to determine the sequencing and prioritization of long term planning that infrastructure, by virtue of its long-lived nature, does require. Meanwhile, the qualitative selection methodology, backed up by quantitative data on the various sectors helps to identify why certain sectors are left aside. For fisheries, a significant consideration is the fact that even though the sector makes a material contribution to GDP, the sector has a declining rate of growth and the stock and health of marine resources in the EEZ is currently threatened by over-fishing. It is considered that this sector should be given a period to replenish while regional coordination efforts are devoted to better enforcement over the foreign industrial fishing sector. Forestry is another natural resource area which would benefit from a period of protection and recovery as opposed to emphasis on greater extraction and downstream product diversification. Livestock is a sphere in which Guinea and other countries to the north have greater comparative advantage and the logic retained is that Sierra Leone would be better off by specializing in rice, cassava and palm tree cultivation to produce surpluses for trade and satisfy the national demand for livestock products in that manner. Tourism does indeed have potential for the economy, but its recovery will take time and, relative to other sectors it is exhibiting negative growth and a small contribution to the economy. Construction is a sector that is not substantial enough to drive indirect benefits into other sectors but will benefit, in reverse, from growth that raises incomes from mining sector jobs, and indirect inclusion of the transport and utility sectors. Also, it is worth bearing in mind that "platform" infrastructure, of the type that is presented in chapter 3, serves multiple purposes. While it will be identified in this report as having particular relevance for addressing constraints in promising sectors, it will also deliver benefit to other sectors without reserve. Thus, for example, better infrastructure for regional trade will deliver benefits not just to those engaged in crop agriculture, but also to fishermen, foresters and livestock herders.

# 4. Promising growth area 1: Enhanced crop production stimulated by trade

Chapter one identifies crops, fisheries, livestock and forestry as the four sub-sectors contributing to agricultural GDP. Table 1.7 shows erratic or declining growth from the latter three and the discussion of unilateralism in Table 2.1 identifies that the nation can exert a higher degree of influence over crop sector performance than it can over fisheries and forestry. Consequently, this analysis puts forward the assertion that Sierra Leone could extract higher growth and greater returns from infrastructure investment in crop-based agriculture if it were to elevate the influence of regional and global export trade in driving sector transformation. Moreover, it asserts that expansion of regional trade is just as important as global trade for synergistic benefit it will bring to increasing the density of value chains and improving domestic competition in the marketing of commodities.

While the Agenda for Change already recognizes the importance of road transport and power infrastructure as essential enablers of agricultural sector growth, the addition here is to focus on the added stimulant of trade which requires additional distinct types of infrastructure investment and capacity building. The discussion of this growth

option proceeds in the following manner:

- It begins by reviewing the rationale for selection of the crops sub-sector as an area of promise which is currently performing below its ultimate potential;
- It explains how trade can support economic integration and enhanced commercialism by subsistence farmers and attract private sector investment due to the development of larger markets;
- It explains how infrastructure which supports trade can support economic diversification and specialization in the economy;
- It argues for stronger policy support favoring both regional and international commodity trade by exploring differences in the structure and density of Sierra Leone's value chains for imported rice versus those for domestic rice and asserts that beneficial synergies would result by greater engagement in both directions of trade.

The filter criteria applicable to crop agriculture are so clearly favorable that this section does not place significant emphasis on justifying inclusion of this area as an area of high latent potential in the economy. Instead, the narrative is more concerned with explaining the synergies between global and regional trade to encourage GOSL to shift away from its ambivalence towards cross-border trade and embrace, more energetically, application of the commercial paradigm shift to apply to both directions of trade. In this process, the relevance and applicability of the filter selection criteria will be revisited.

It is important to note that the final stage of this analysis introduces a fork in the road resulting in action plans that differentiate between a chosen direction—whether regional or global trade. As such, while this growth strategy constitutes a single, synergistic analysis of the benefits of trade to Sierra Leone's agricultural GDP growth, chapter three will develop two variants of infrastructure investment plan (IIP) to correspond to the relevant sector performance upgrade measures introduced here. This is not to suggest that one variant is superior to the other, but to make evident that infrastructure investment planning must be distinctly tailored to support the respective directions of agricultural export trade.

## CRITERIA 1, 2 & 3: CROP PRODUCTION OFFERS CLOUT, INCLUSION AND GREATER POTENTIAL

The crops sector has been selected both because of its current contribution to GDP (in absolute terms and rate of growth), and because of its greater potential to maintain or even improve its economic impact if stimulated by trade. On the extra-regional trade side alone, the NES aims to boost extra-regional exports from $33.1 million in 2009 to $251 million in 2015 and that would result from quality improvement and production increases alone. This could be boosted by possibly 25% more if coffee, cocoa and other cash crops were re-oriented for exit out of Freetown and the multiplier effect produced growth from related trade facilitation activities in the economy.

Perhaps more important is the fact that GOSL is placing a high degree of reliance upon the crops sector to deliver growth and reduce poverty but the leveling off of the recent agricultural growth rate is a concern. Results to date show progress but analysis presented below will show why greater gains are possible by engaging Sierra Leone's large population of smallholders in more commercial behavior which is stimulated by trade. In linking its National Sustainable Agriculture Development Plan to CAADP, Sierra Leone embraced the 6 percent Africa-wide annual growth target for the agriculture sector. Following signature of the compact, MAFFS and ECOWAS, assisted by the International Food Policy Research Institute conducted a review of Sierra Leone's recent agricultural sector performance to determine if the sector was on track to meet its target and whether that target would be sufficient to deliver the MDG 1 goal of cutting poverty from 70% (measured at a threshold of one dollar per day) to 42% by 2015. The findings were regrettably negative on both counts. Not only has recent agricultural growth hovered around the 4 percent mark in Sierra Leone, but the modeling concluded that, assuming the total economy progressed at the (then observed) growth rate 7.3 percent respectively, agriculture would have to deliver 7.1 percent annual growth for the period 2008 through 2015 in order to achieve the desired poverty reduction target. More significantly, crop production would have to deliver growth of 8.7 percent annually to deliver this outcome. These findings identify the degree of reliance being placed by Sierra Leone upon performance of the crops sector to meet its poverty reduction goals.[5]

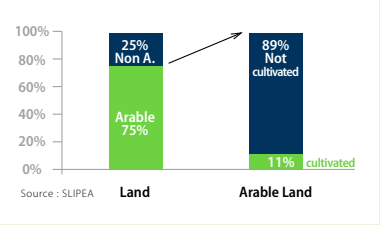
In light of the high expectations which government has for the crop sector it seems quite important to identify the reasons why the sector has higher potential than presently tapped and how the conditions for trade can be enhanced.

Sierra Leone has abundant land of which about 75 percent is arable but only about one fifth is cultivated. Hence the most fundamental factor input into crop production—suitable land-- is in abundant supply. Therefore, if the current labor constraint can be addressed through mechanization, output can increase as a result of expanded cultivated areas alone. Yet, MAFFS is aware that productivity must improve as well and this can be achieved through the use of improved seeds, delivery of better inputs (via better access from feeder roads) and increased value gained from tapping the irrigation potential of the country's natural endowment. The gap between performance and potential is best illustrated by taking the examples of two key crops—one food staple and one cash crop: rice and cocoa. Rice

5 Sierra Leone: Agricultural Growth, Poverty Reduction and Food Security, Past Performance and Prospective Outcomes. NEPAD, ECOWAS, Sierra Leone CAADP

production is critically important for Sierra Leone, for stability, food security and for the economy. Rice accounts for over 75 percent of agricultural GDP, 88 percent of cultivated land area and the crop is grown by 96 percent of farming households. In short, rice is

## Box 2.4: Sierra Leone has abundant arable land for expanded crop production

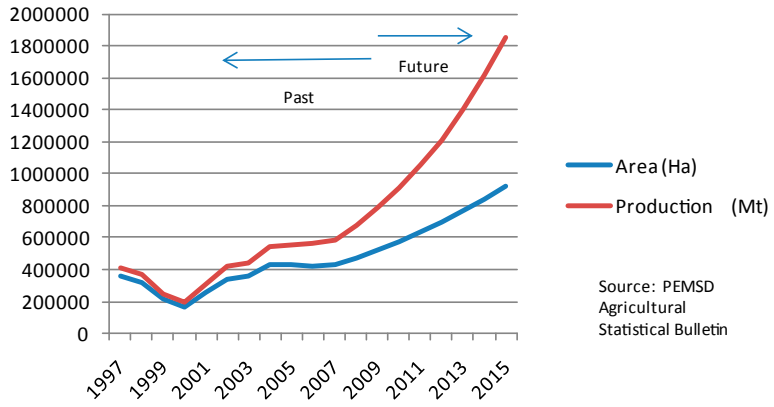



Sierra Leone's single most important staple and annual consumption of rice, currently estimated at 104kg per capita is amongst the highest in Sub-Saharan Africa. Rice production is not yet sufficient to satisfy domestic consumption so imports from overseas are needed to close the gap. Yet, the National Rice Development Strategy (NRDS) is presently the most advanced in terms of planning and implementation, serving to demonstrate how potential can be extracted from a given sector if resources and attention are concentrated on it. If repeated for other crops, sizeable gains in output and productivity could also be accomplished. Table 1.11 presented in Section 1.2 communicates the intense national desire to achieve self-sufficiency in rice production in the coming years along with the aspiration to become a surplus supplier into the region.[6] Figure 2.3 served to confirm that Government is making progress against its twin objectives of achieving productivity gains in yield along with expansion of acreage and when both levers are extrapolated forwards in time, as in Figure 2.4, the country should be able to become a specialized producer and exporter of rice into the ECOWAS region in future years. MAFFS is working with the Coalition for Africa Rice Development to develop a comprehensive plan for how the future potential could be achieved, taking into account the different ecologies for rice cultivation, the land area available in each and the yield gains achievable by zone.[7] Mastery of this total endowment and its potential is what the AU/NEPAD review was referring to when recognizing the impressive planning for rice production embedded within the national plan.[8]

Table 2.5 identifies rice crop yields achieved for 2008 which, as a weighted average amounts to 1.43 metric tons per hectare. The upland zone represents, by far, the most substantial land area currently dedicated to rice production but as the upland rice system relies upon slash and burn shifting cultivation, a gradual shift will be encouraged towards more stable perennial and tree crop cultivation with inter-planting of rice, other crops and livestock.

Meanwhile, targets for the future envisage a profound shift in favor of allocating IVS land to rice production for irrigation-assisted rice production. This strategy, presented in Table 2.6 below, envisages the possibility of achieving self sufficiency by 2013 and surplus adequate for export by 2018. This can be achieved through upgrades in inputs, seed stock, plus investment in water management systems that enable two and three yields a year. However, such results require concomitant investment in trunk and feeder roads, seed multiplication systems plus irrigation infrastructure.

## Figure 2.4: Targeting Accelerated Productivity in Rice Production




## Table 2.5: Inventory of Comparative Advantage of Sierra Leone and Neighboring States

| Ecology | 2008 Crop Yield in Metric Ton Per Hectare | | | | |
|---|---|---|---|---|---|
| | East Region | North Region | South Region | Western Area II | National |
| Upland Rice | 1,37 | 0,65 | 0,77 | 0,31 | 0,7 |
| Boliland Rice | 0 | 0,71 | 1,15 | 0,31 | 0,72 |
| Inland Valley Swamp Rice | 2,14 | 1,63 | 1,33 | 1,21 | 1,58 |
| Riverrain Rice | 0 | 1,56 | 0 | 0 | 1,56 |
| Mangrove Rice | 0 | 3,17 | 0 | 2,04 | 2,61 |
| **All Rice Ecologies** | | | | | **1,43** |

Source: Agricultural Statistics Bulletin 1(a) July, 2009 PEMSD.

6 Sierra Leone's "National Rice Development Strategy" prepared for CARD in specifies that government's goal is to achieve rice self-sufficiency by 2013 and enough surplus production to begin exporting to neighboring MRU countries in 2018. This presents a minor discrepancy with the 2011 crossover date from deficit to surplus identified in Table 31 drawn from a different source, the July 2009 Agriculture Statistics Bulletin compiled by PEMSD. However, the point that Sierra Leone remains target-oriented on the goal of achieving self sufficiency remains consistent.

7 The NSADP states that "Investments under the CARD either on a national or regional basis will improve research, extension and processing of rice. A key strategic focus will be increasing market quality milling with improved bagging." Ibid, page 24.

8 CAADP Post Compact Review, IBID.

### Table 2.6: Future Targets for Increased Rice Area and Yields

| Ecology | 2007 | | | 2013 | | | 2018 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Area (Ha) | Yield (MT/Ha) | Prod (MT) | Area (Ha) | Yield (MT/Ha) | Prod (MT) | Area (Ha) | Yield (MT/Ha) | Prod (MT) |
| **Upland** | 363 894 | 0,72 | 349 561 | 400 000 | 1,25 | 500 000 | 425 000 | 1,5 | 637 500 |
| **IVS** | 170 000 | 1,23 | 324 442 | 225 000 | 2,5 | 562 500 | 400 000 | 4,0 | 1 600 000 |
| **Mangrove** | 70 000 | | | 100 000 | 2,25 | 225 000 | 125 000 | 3,5 | 437 500 |
| **Riverain** | 5 593 | | | 25 000 | 2,5 | 62 500 | 50 000 | 3,5 | 175 000 |
| **Boliland** | 50 000 | | | 80 000 | 1,5 | 120 000 | 100 000 | 2,5 | 250 000 |
| **TOTAL** | 659 487 | 0,97 | 674 003 | 830 000 | | 1 495 000 | 1 100 000 | | 3 100 000 |

Source: National Rice Development Strategy, CARD 2009, page 17. (No alterations made to computation anomalies)

Clearly, Sierra Leone has ambitious plans to develop a competitive advantage in rice production, aiming to go from approximately 680 thousand MT of output in 2008 to more than four times that output in a decade. Many factors must work together to bring about this "rice revolution" in Sierra Leone. Increased density of rice value chains supported by private investment and public infrastructure must also come into play.

The advances anticipated under NRDS underline the importance of continual upgrades in adoption of improved seed varieties such as NERICA and lends weight to the argument that research conducted on a regional scale can bring benefits to participating nations. NERICA is now gaining greater appreciation both within Sierra Leone and in Liberia and a private Sierra Leonean farmer has now decided to specialize in the multiplication of NERICA seed as an area of specialization. The case of rice demonstrates how the use of inputs, irrigation and other constraint reducing investments can yield greater potential in food crop production which could likely be replicated for other crops.

Cash crop production is constrained by slightly different factors and bears its own analysis. Most cash crops are, in fact, tree crops including cocoa, coffee and cashews. Cocoa is taken as the proxy example of latent potential for the cash crops sector. Trade offers the strongest stimulus to introduce measures addressing constraints to the tree crops sub-sector. Cocoa is the second most important export product for the nation after mineral exports, contributing 7 to 9% of national export revenues. Like rice, there is a gap between current production levels and assessed potential but since cocoa is not consumed domestically, there is no need for imports. Cocoa represents a sustainable tree crop particularly suited to Sierra Leone's climate and latitude. Figure 1.4 presented in chapter one revealed that both coffee and cocoa suffered declines during the war but cocoa has rebounded and is now generating revenues approximating those achieved at the 1986 peak. While this progress is impressive, it must be placed in a larger West African context to understand both the magnitude of output and the size of the total cocoa market. Currently, West Africa produces 70% of the world's cocoa supply with Ivory Coast, Ghana and Nigeria claiming top positions in production. With exports of 1,150,000 MT, (more than one hundred times the output of Sierra Leone), Ivory Coast accounted for 40% of world production in 2010. While this underlines that Sierra Leone is behind ECOWAS countries in cocoa production it also serves to emphasize that global demand for cocoa is large and will continue to grow. Hence, Sierra Leone can still enter this market and carve out a niche position.

Table 2.7 identifies problems recorded by SLIEPA in the cocoa production chain. Changes in crop husbandry and, more specifically, post-harvest crop drying, quality preservation through safe storage and an improvement in competitive trading conditions would serve to close a gap between economic returns at present and their potential under more optimal conditions. Yet, as with rice, it is not "science" alone that will close the gap between performance and potential in the cocoa sector. Close examination reveals that Sierra Leone could theoretically achieve a four-fold increase in the value of cocoa on the current acreage alone (before area expansion), from improved varieties and cultivation practices and better attention to quality. Quality improvements are essential to delivering higher farm-gate prices but only if participants in the cocoa value are incentivized and will gain the benefits. Sierra Leone's cocoa output presently fetches a substantial discount from global market border prices because the beans are not properly dried and are thus plagued by mould. Beans are not sorted according to grade and carry no value-adding certification or tracing of any kind. This situation depicts a problem that could partially be addressed by a quality management system. Improvements to inspections, grading and certification processes will all contribute to extracting greater value latent in Sierra Leone's cocoa crop. However, there is a bigger, more fundamental problem to consider. This is the fact that there is little incentive for a farmer to dry the crop properly and pursue other methods to improve quality because price signals do not penetrate to producers.[9]

9 Sierra Leone: Adding Value Through Trade for Poverty Reduction, A Diagnostic Trade Integration Study, UNDP October 27, 2006, page 31.

**Table 2.7: Present versus Future Potential from the Cocoa Production Chain**

| Cocoa | Acreage | Husbandry | Yields | Quality | Processing |
|---|---|---|---|---|---|
| **Present** | Cultivated area rose from 35,000 ha in 1997 to 112,000 ha in 2009. Small 1 to 6 ha plantations are the norm. Attention to prior stands is up. | No inputs used. High incidence of black pod disease and pests. No SL data, but Ivory Coast estimates 30% of crop lost each year due to BP disease. | Amelonado varieties over 60 yrs old. Currently about 410kg/ha in fresh beans, up from 370/ha in late 90s. | Poor. Grade 1 moisture content <7.5%; SL at >10%; Gr 1 mould standard < 4%; SL at > 8%; Gr 1 defective beans <3%; SL at >5%. Sold at discount. | Picking & opening pods; natural fermentation 3 to 5 days; drying requires sun 7 to 8 days; decent drying racks. |
| **Potential** | 25,000 ha need replanting; 17,000 ha need rehabilitation via side grafting to transfer genetic benefits of new strains into old plant stock. After that, priority is area expansion. Area available unspecified. | Better brush control, shade management. Introduce bio-control for better pest management. Better pruning to reduce pod borer infestation. Necessary to replace current stands with improved varietal clones or hybrids. | Nestle research has achieved 2,000kg/ha. Ghana & Ivory Coast hybrids achieve 1000-1500kg/ha. Thus, at least a 3-fold increase seems possible. SL ARI has 2 clonal gardens. | By increasing to grade 1 quality, Sierra Leone can capture 33% higher unit cost. Other gains possible from certification as Organic or Fair Trade. | Improve fermentation—keep in heat & protect from rain; removes bitter taste & improves cocoa flavor; Improve drying—get moisture down to 8%. |

Until recently farm-gate prices for cocoa were the same for all qualities. The collection system operated within a weak value chain and dissuaded cocoa traders from buying directly from farmers.

Sierra Leone's cocoa farmers lack external information sources to keep them apprised of world prices for cocoa beans; consequently they trade their crop with relatively poor awareness of global conditions. The management system in effect has been to keep producers apart from traders with local assemblers procuring beans from numerous farmers at a dictated price without regard for quality before passing the crop on to export traders. Closer contact between actors in the value chain would enable traders to pass on price distinctions for quality of sorted and graded output, but this does not happen at present.

In fact, the irony is that a farmer likely gains greater returns at present from selling product which is wet and heavy than if they sell it dry. This perverse incentive must be addressed as much by structural changes that bring more traders and competition into the cocoa value chain as it is by systems and equipment to improve crop drying practices.

## CRITERIA 4: TRADE ENCOURAGES ECONOMIC DIVERSIFICATION AND SPECIALIZATION

At its heart, trade involves exchange, whereby two producing farmers, communities or nations can be better off if each specializes in their sphere of comparative advantage and then acquires what the other has to offer through trade. The lack of power supply for transformation of primary commodities into more diversified, processed goods is a major impediment in this regard. If, however, the supply of power to market hubs in the interior could be improved, Sierra Leone would be able to add more value to its primary production and diversify the product line which it can consume and trade.

Agro-processing also permits better preservation and thus avoids the losses which occur without systems to dry, convert and preserve produce. Fresh tomatoes have a longer shelf life as tomato paste; fruit can be converted into juice and canning operations can add value to both, introducing specialization and more jobs into the fruit and vegetable value chain. Better roads and market infrastructure are also necessary to support this transformation. Feeder roads or river transport are needed to reach the heart of production areas with the latter being particularly important for access to rice producing areas. Market infrastructure serves as a magnet to enable exchange and must be supported by all-weather trunk roads than can facilitate the movement of cargo between supply centers and across borders. Finally, border infrastructure is a critical element of infrastructure which is currently missing in Sierra Leone, rendering trade flows informal and uncontrolled, increasing the propensity for successful engagement in illegal and criminal aspects of human, drugs and contraband trade. If Sierra Leone had better market centers, roads and border crossing facilities, a transformation from informal to formal cross-border trade could begin to occur. AU/NEPAD noted the importance of encouraging this transformation when it reviewed the Smallholder Commercialization Program. The review noted that "rice is the major crop planned for in the sector plan" and recommends that "detailed production, yield and area cultivated targets for major agriculture products other than rice" be developed. It also states that, ***"given the strategic importance of regional trade and integration for long term growth, the SCP needs to show more explicitly, how the country intends to exploit the opportunities of regional trade, and what activities will be carried out to promote trade across border corridors.***[10]"

10 CAADP Post Compact Review Sierra Leone: Technical Review Report. June 13, 2010, Dakar, pages 11 and vi.

The lack of emphasis on regional trade is a gap within the current strategy which, if addressed, could serve to stimulate further productivity, output and economic gain in Sierra Leone.

## CRITERIA 5, 7 & 8: TRADE SUPPORTS INTEGRATION AND PRIVATE SECTOR DEVELOPMENT

This section argues in favor of increased emphasis on trade for the benefits it could bring to Sierra Leone in terms of greater commercialization of farmers and their better integration into markets. Indeed, both are necessary to remove rural farming communities from their current conditions of relative isolation and orientation towards subsistence agriculture. Trade certainly helps with regional integration but it also helps with national inclusion in the market economy.

Trade is secondary to production. Without production, there can be no trade. With trade, however, producers are connected to consumers; markets are created and pressures for efficiency are introduced. Markets help to develop and diversify the private sector and attract investment for down-stream processing and agribusiness. This ushers in a virtuous cycle of information exchange which occurs when a market is generated. Through participation in trade, farmers become better integrated in a market economy. That can be a national economy, a regional economy, or indeed the global economy. This is enhanced in the presence of effective value chains which support agricultural development. Through value chains cocoa farmers become participants in the global economy because their output is channeled into the foreign arena. In the case of rice, the same principle holds: if a farmer consumes their entire crop, they remain fairly isolated within a subsistence economy particularly if they hand-pound their paddy to produce milled rice. If, however, they engage in trade, they become participants in the national or regional economy. In principle, the more distant the ultimate consumer market is from the local producer, the more the producer gains exposure to values, tastes and standards and pressures which are different from their own milieu. These stretch their horizons and expose them to new ideas. The likelihood of these external signals being perceived by the producer depends upon the degree of contact achieved between participants in a given value chain.

Integration into the market economy exists primarily because of the direct price effects of trade. By improving the price that farmers can earn for a given level or quality of output, participation in the market results in the transmission of signals which can encourage increased output and specialization.

Hence, the price effects of trade deliver the benefits of increased income as well as the stimulation of behavior by transmitting information. At the same time, trade delivers powerful incentives for efficiency. Through price effects, a farmer's income is increased if they can secure a better price for a given level of output. Conversely, if a farmer can reduce their costs in the face of an unchanged price, they can also increase their margins and, again, increase income. Efficiency pressures are therefore a vital and positive attribute of trade. Efficiency incentives bring pressure for improvements to infrastructure, processing, marketing and quality management systems. One set of pressures is to reduce domestic transactions costs which form a wedge between border prices and farm-gate prices reducing farmer margins.[11] A different set of pressures is to increase border prices of exportable products by gaining a quality premium, delivering a "lift" that enables farmer margins and incomes to rise. Trade also introduces other benefits described below, all of which can serve to build stronger links and in Sierra Leone from which stronger national unity and stability can ensue.

- **Backwards, forwards and horizontal linkages.** Through trade, producers have the opportunity to connect with all manner of market participants, some who might supply inputs (backward linkage), others who might provide a service such pruning or spraying or tractor mechanization to substitute for labor (horizontal linkages) as well as those who purchase the commodities (forward linkage) and channel goods into markets.

- **Government revenue and foreign exchange.** Government revenue is a benefit that can accrue from a growth in exports and the expanded secondary job creation and enterprise activity that arises from farm-gate to border-gate. Foreign exchange is a benefit that is only generated in cases of regional or global trade. The advantage of global trade is that convertible currency is exchanged. Regional trade offers the prospect of convertible currency once monetary harmonization and standardization on the ECO is achieved.

- **Acquisition of skills.** Expanded interaction in markets exposes participants to new ways of thinking and induces the acquisition of new skills, especially, for example, when price effects transmit signals for a quality premium and a producer is encouraged to adopt processes such as drying, washing or sorting which adds value to their output.

- **Technological change.** Access to regional or foreign markets is more likely to deliver exposure to new technologies of all types, whether that might be in terms of seed stock for example, processing technique, value capture from by-products or even modes of communication and connection to markets.

11 These are the pressures for which better infrastructure can provide a remedy. Improvements to market centers, storage facilities, feeder roads, trunk roads, water transport, ports and electricity for processing can all reduce domestic transaction costs and therefore improve the conditions for trade. Enumeration of these remedies will be the topic of chapter three.

This summary serves to emphasize the huge distinction between the "isolation" of subsistence economy versus "participation" in a market economy. Without doubt, trade helps to induct smallholders into market participation and thereby transmit incentives that stimulate commercial behavior.

The rationale behind Sierra Leone's Smallholder Commercialization Program is that there is a need to pull farmers out of the isolation of subsistence-oriented crop production and place them into a setting where they are participants in a market-driven agricultural economy.

The paragraphs above serve to illustrate the vital connection between trade and markets. The corollary, then, is that the most effective means of driving the commercial behavior change desired of Sierra Leone's smallholders is to immerse them in trade. Regional trade is equally or more powerful than global trade for this purpose since food crop production is the most prevalent farming activity touching all smallholders.

Food crop value chain development is a helpful, vital contributor to this process which argues in favor of greater public support for cross border trade in addition to trade that brings cash crop producers into the exports business.

## CRITERIA 6: REGIONAL TRADE WILL ACCELERATE COMPETITION IN CASH CROP MARKETING

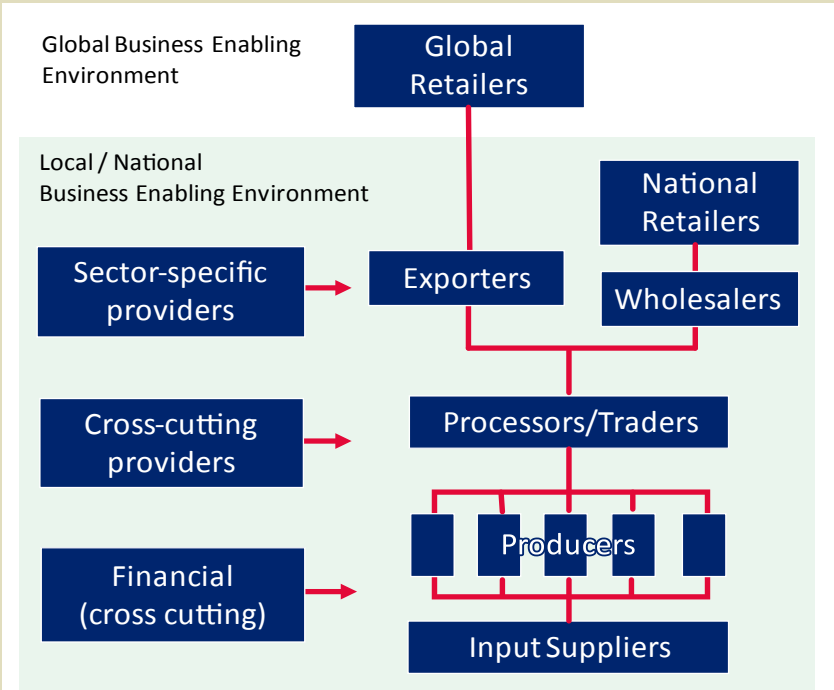
Sierra Leone has a favorable stance towards global trade in cash crops but ambivalence towards regional trade, especially of rice and palm oil which are sometimes in insufficient supply to meet local demand. Yet, periodic bans on cross-border trade result in a mixed message towards the nation's farming community and represent a missed opportunity to develop commercialism among smallholders. The ambivalence arises largely from the fact that the current pattern of cross-border trade is informal and takes on the characteristics of smuggling. Livestock and commodities which cross borders informally escape sanitary and phyto-sanitary inspections and possible quarantine procedures. Data on such flows is not captured. This situation could be different if the country had more adequate infrastructure to foster cross-border trade and began to orient exchanges from informal patterns into formal channels. Both would have to improve—the infrastructure supply and the policy environment. While the former would support a new orientation by government, the latter is essential to usher in beneficial competition. This is because the other serious constraint depriving farmers of better incomes from cash crop production is the degree of concentration in the marketing chain for global export commodities like cocoa. The remedy currently being contemplated by GOSL for this problem is to re-introduce a public marketing organization that will purchase farmers' global export produce. An alternative approach offered here is for GOSL to more energetically condone and facilitate regional trade in food crops and encourage greater trading capacity to be built up in cross-border trade among the indigenous population. The supposition is that the latter will then penetrate the cash crop marketing chains and offer greater competition therein. This does not obviate the need for a public marketing organization, but it would enable it to focus more on implementation of a quality management system which is indeed needed in the country.

The paragraphs below explain how and why beneficial synergies could arise from greater engagement and policy support for regional trade. This relates to the current dynamic of how Sierra Leone's imported rice and cocoa value chains function. The assertion is that if more support were provided to cross border trade in locally produced rice, this would ultimately reduce the cartel that controls both imported rice and the purchasing of cocoa. To illustrate this it is necessary to explore both the functions and benefits of value chains and apply them to the situation prevailing in the rice/cocoa value chain structure at present.

Though rice and cocoa represent very different crops-- the first a local consumption item high in demand and the other an item which enjoys no local demand at all, the performance of both is vitally dependent on functioning, efficient value chains.

As noted above, integration into the market economy via trade is enabled through participation in agricultural value chains. Where value chains are fully developed and "crowded in"

**Figure 2.5: A Dense, Healthy Value Chain**



with a multitude of participants who add value and transmit information, the efficiency of a market is improved and producers will ultimately gain. A stylized example would be like that depicted in Figure 2.5 which demonstrates a dense and healthy value chain which includes both vertical and horizontal linkages in the national arena-- backward linkages between producers and input suppliers, forward linkages into the processing and marketing chain and horizontal linkages for any number of value adding service providers. Ultimately, value chain participants are connected within the business because of the pull of the global market at the summit. Global retailers function at the top of the chain as brokers interpreting end-market demand.

The information transmission and incentive function of the price effects of trade are depicted in Figure 2.6. This diagram demonstrates that a functioning value chain should serve to transmit end market requirements to value chain participants at all lower levels eliciting a willingness to respond. If the willingness exists, but capacity does not, this will bring pressure for an upgrade in capacity.

Realization of gains by producers depends, however, on a number of factors, including whether their value chain is "thin" or fully developed and upon the adequacy of competition. The latter aspect is important so that any given link within a value chain does not capture economic rents for services beyond what is fair or efficient. This is a key point which is particularly important and relevant to Sierra Leone's smallholders. Value chains are not all the same and are not intrinsically efficient or fair. It is not enough for public policy to recognize the potential for agricultural value chains to serve a developmental purpose; it is essential that they be fleshed out to be made strong, competitive and fair. A return to the cocoa commodity trade and value chain helps to demonstrate this issue.

In the case of cocoa, farmers have no need or intention to consume their output. Consequently, smallholders are deliberately engaged in cocoa production for the straightforward purpose of selling their crop to gain income. The same is not true for rice. Sierra Leone's farmers produce rice primarily for consumption and, in case of family-level surplus, or depending upon seasonal factors and a need for cash, they may sell some for income. Since Sierra Leone is not yet self-sufficient in rice production, a substantial volume of rice is imported each year into the country.. The interesting connection here is that rice imports are intertwined with cocoa exports through the cocoa value chain. Figure 2.7 provides a simple depiction revealing that in Sierra Leone, the cocoa buyer is also a seller of imported rice and the cocoa seller is a rice buyer.[12] The transactional exchanges between producers, assemblers and rice/cocoa traders go both ways. Yet, the rice import business is highly concentrated in foreign hands

**Figure 2.6: How Value Chains Transmit Signals**

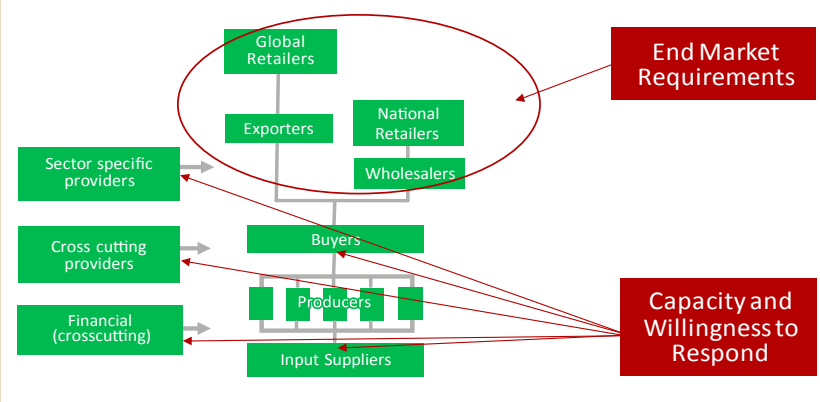
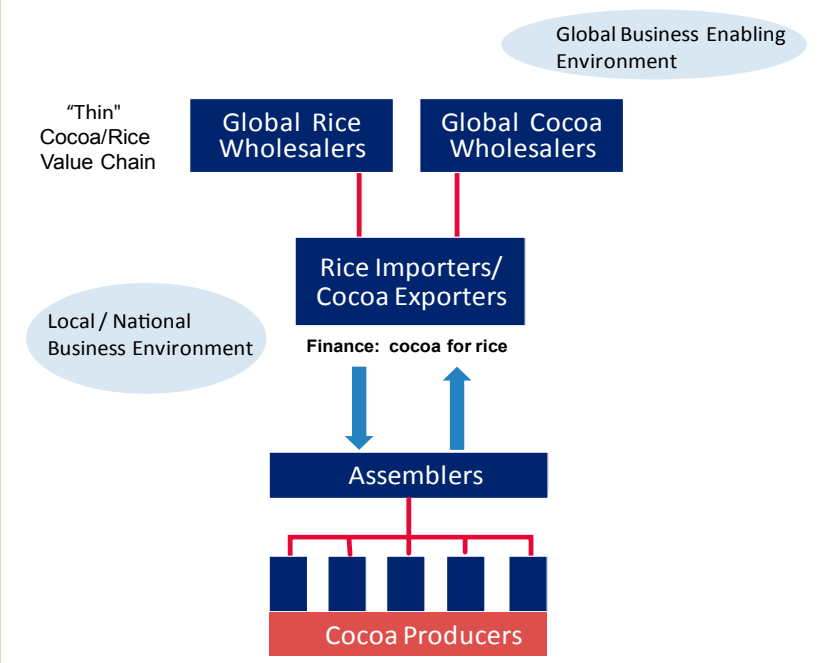



**Figure 2.7: Sierra Leone's Rice Import/Cocoa Export Chain**




12 Cross-border Trade and Food Security: Liberia, Sierra Leone, FEWS Net, USAID, May 2010, page 13.

with about six firms accounting for 90 percent of imports.[13] This means that the cocoa buying business is equally severely concentrated and smallholders have few alternative outlet channels and correspondingly lower bargaining power. Complaints about unfair purchasing practice in the cash crops sector are legion.

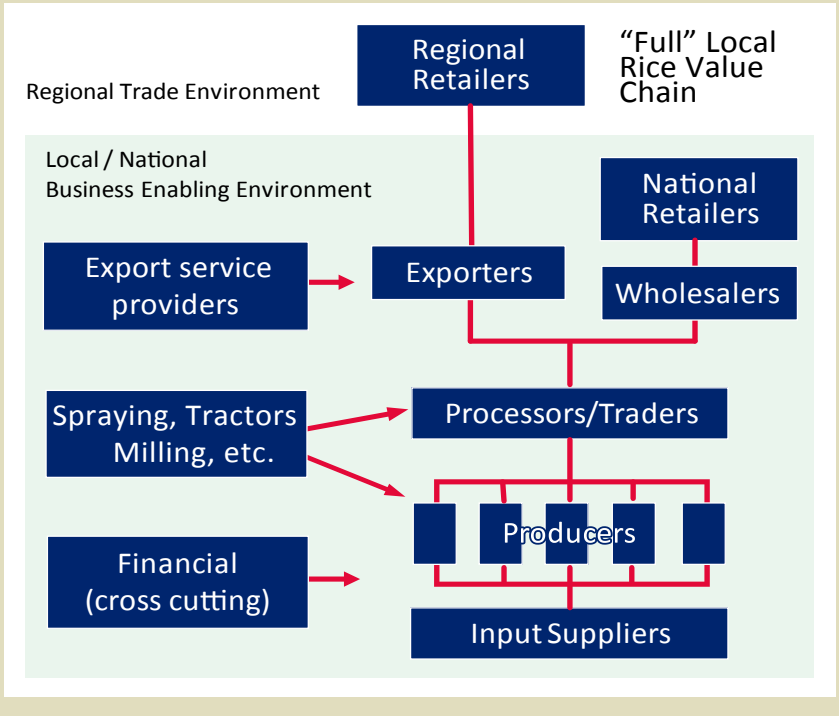
Concentration in the rice imports business is apparently due to the requirements for letters of credit and the existing network of rice importers is better able to arrange these with foreign bank connections than is feasible in the domestic financial market.[14] Given seasonality between cocoa versus rice harvests, many cocoa producers need to purchase rice for consumption around the time of their cocoa harvest, so the synergies in trade between these two commodities has grown up over time. On one hand, the degree of concentration in the cocoa value chain reduces the bargaining power which cocoa producers may have in securing best price for their output. On the other hand, they may receive advances for their cocoa crop, a mechanism used by the handful of traders in the cocoa chain to secure their share of the future cocoa supply.The net effect is that the cocoa export/rice import value chain is "thin". Because the production side of this value chain caters to the requirements of cocoa producers, a crop which presently makes use of no fertilizers or other chemical inputs, it has no backward linkages. It also has few or no horizontal linkages so the framework keeps cocoa farmers in relative isolation from contact as compared to that which might be gained under a different market or value chain structure. Cocoa smallholders connect with the global market through what is, ultimately, a captive arrangement. Where a country has been able to better develop its value chains, including quality management systems that reward farmers for higher quality beans, they capture a premium as compared to the prices obtained in Sierra Leone. Table 2.8 shows that Sierra Leone, Guinea and Liberia all tend to trade cocoa at a discount as compared to Nigeria, Ivory Coast and Ghana.

**Table 2.8: Comparative Export Prices of Cocoa, with Sierra Leone as Comparison Base Price**

| AVG Export Price/MT | 2006 | % Premium | 2007 | % Premium | 2008 | % Premium |
|---|---|---|---|---|---|---|
| Sierra Leone Cocoa | $1 302 | Base | $1 493 | Base | $2 023 | Base |
| Guinea Cocoa | $1 425 | 9,4% | $1 416 | -5,2% | N/A | |
| Liberia Cocoa | $1 452 | 11,5% | $1 454 | -2,6% | $1 985 | -1,9% |
| Nigeria | $1 615 | 24,0% | $1 630 | 9,2% | $2 164 | 7,0% |
| Ivory Coast Cocoa | $1 535 | 17,9% | $1 787 | 19,7% | $2 258 | 11,6% |
| Ghana Cocoa | $1 799 | 38,2% | $1 769 | 18,5% | $2 063 | 2,0% |

Source: FAOSTAT. Price $ per MT

**Figure 2.8: GOSL is Strengthening Local Rice Value Chain**




The value chain for local rice production offers an interesting contrast to that of cocoa, particularly in terms of its potential. The observed phenomenon at present is that local rice and imported rice are not true substitutes for each other and they operate in parallel markets. They are distinct in many respects, including price, taste, quality and the identity of market makers at the summit of the two respective rice market chains.[15] Local rice trades at a discount to imports during surplus seasons and at a premium during hungry seasons. With respect to local rice, the NSADP makes clear that government is going to great lengths to promote national rice production. With extensive help from development partners, substantial investments are being made in mechanization, rice milling stations, seed multiplication and other functions such as extension services to add value to local rice production. The sum of these concerted efforts will serve to develop a healthy local rice value chain which, over time, will "crowd in" contributors and increase contact between smallholders and other market participants. Smallholders

13 FEWS reports that six exporters control the cocoa trade. The National Rice Development Strategy reports that rice imports are dominated by four importers, three of whom function as a cartel.
14 Re-introduction of export credit guarantees or letters of credit by Sierra Leone banks could help to eliminate barriers preventing entry of more traders in the rice imports/cocoa exports value chain.
15 Rice import trade is known to be dominated by foreign national trading networks, yet these businessmen are less involved in cross-border trade of locally produced food crops. A promising avenue through which to build indigenous trading capacity might be through greater encouragement of local entry into the business of regional trade.

engaged in rice production will gain the opportunity to transact with many more market players whether they sell any surplus or not. Within the developing local rice value chain, one can expect smallholders to gain greater relative exposure to market forces and new knowledge and skill while transacting in an increasingly commercial sphere. One can expect the local rice value chain to look very different in the future from that of the cocoa chain at present, and eventually fill out to include all of the functions and participants portrayed in Figure 2.9. This fleshing out of the local rice value chain can and should be allowed to happen in a manner that increases competition and improves the market conditions under which local rice production can thrive.

The inclusion of regional retailers at the summit of this value chain identifies the premise that regional trade could be positioned as a powerful end market stimulant to pull greater productivity and efficiency from the rice value chain in Sierra Leone. But that is not all. Development of regional trading capacity will ultimately translate into global trading capacity and will introduce greater domestic participation in the marketing chains for cash crops destined towards global markets. The fact is that Sierra Leone's food crop value chains are likely to gain greater "density" at a faster pace by exposure to regional trade than is the case for crops oriented towards global trade. In this process, expanded indigenous trading capability in food crops could be developed and eventually cross into the market for crops destined for extra-regional trade—not just cocoa but coffee, cashews, ginger and the like. This offers a natural, healthy and evolutionary process for upgrading the human resource capacity in Sierra Leone's agricultural sector. As such, Sierra Leone's policy makers should consider the broader potential offered by a policy of encouraging regional trade. The pursuit of trade in food crops should be considered for the power it could have to serve (1) as better "learning laboratories" for smallholders and national traders, and (2) for bringing greater density and competition into cash crop value chains in due course.

The next section turns to a second growth option to examine the promise of growth in Sierra Leone's ICT sector. Before leaving the topic of agriculture, however, it is worth emphasizing that trade in agricultural commodities will be significantly enabled by the provision of better internet services. Not only will this improve the flow of information concerning prices and market conditions but it will aid in the collection of trade data. Without doubt, progress would be made faster and gains would be greater if all of the MRU countries were to work collaboratively on this endeavor.

# 5. Promising growth area 2: National and regional integration from ICT

This growth option puts forth the assertion that Sierra Leone will realize a boost in economic growth on the back of planned investments in the ICT sector. Not only that but substantial social benefits will accrue to the nation as well. This is possible due to institutional reforms that have partially de-monopolized the sector and enhanced its readiness to attract further public and private investment that will make a significant impact in closing the digital divide.

Benefits will be realized through back to back public-sector led investments that, together, will deliver conditions needed to launch subsequent private-sector development of a vibrant internet services market. This process will begin with public investment in improved internet connectivity between Sierra Leone and the world through participation in laying a submarine fibre optic cable around the west coast of Africa and establishment of a national landing station near Freetown. This will be followed by development of a terrestrial backbone to build out the supply of cheaper broadband internet to metropolitan Freetown, to connect urban hubs and key educational centers in the hinterland and to integrate with networks that span deep into the region. Subsequently, the private sector can be expected to take advantage of attractive market conditions, seizing the opportunity to enter and invest in Sierra Leone's IT sector just as was done in the telephony sector over the past decade. The resulting connectivity has tremendous potential to deliver downstream benefit to Sierra Leone, starting with that of greater national integration, regional integration and radiating out to touch many different additional spheres of productive and social activity.

Infrastructure sectors have the potential, on their own merit, to drive economic growth. This is nowhere more evident than the explosive growth achieved in the cellular telephone industry across the entire African continent. Sierra Leone has done a commendable job of liberalizing its telecoms sector and inviting private sector participation into its market. The structural and governance reforms already introduced in this sector stand in stark contrast to the situation in Sierra Leone's transport and energy sectors where a national transport policy has not yet been developed and where energy sector governance reform has a long way to go to create attractive conditions for private sector entry. Sierra Leone's institutional reforms completed in the ICT sector enhance the sector's readiness to deliver further growth on the back of forthcoming investment in an international gateway to the internet and potential to deliver broadband service. At the same, the PIDA report notes that significant gaps remain in terms of Africa's entry into the

digital era and that impressive developments mask the challenge that the ECOWAS region faces in providing access to modern ICT for its over 300 million inhabitants. Discounting Nigeria, ECOWAS countries support an internet penetration of 3.4 percent, compared to 8.71 percent in Sub-Saharan Africa, and nearly 27 percent globally. Broadband penetration is also below the Sub-Saharan average, at between 0.07 and 0.09 percent, compared to the continent at 0.11 percent. Wide inter-regional variations exist with highest mobile and internet penetration levels recorded in The Gambia, Cape Verde, Ghana, Nigeria and Cote d'Ivoire at over 60 percent and the lowest in Niger, Sierra Leone, Burkina Faso and Liberia below 21 percent. The prices of ICT services are generally very costly in ECOWAS, with a fixed broadband sub-basket costing about 3 times more than the global average. This national and regional background represents the context in which the ICT sector with an emphasis on internet expansion has been identified as a promising growth area for Sierra Leone.

The following sections take a deeper look at the specific potential offered Sierra Leone's entry into the digital era and the benefits which sector expansion will deliver in terms of the filter criteria identified at the start of this chapter.

## CRITERIA 1: CONTRIBUTION TO GDP AND CATALYTIC ATTRIBUTES AS A DRIVER OF GROWTH

Sierra Leone has already witnessed how liberalization and service cost reductions in the telecoms sector unleashed a wave of growth and investment in the mobile telephony sector. A second wave of economic activity can be expected when faster, better, cheaper internet services become available. These will generate benefits in terms of revenues from an expanded customer base consuming a larger aggregate volume of IT services, from direct IT jobs created in the industry and from indirect job creation and growth through the multiplier effect. Indirect benefits will accrue from IT-enabled services whereby every direct IT job can be expected to yield about four additional jobs in ancillary services.[16]

The submarine cable connection will result in cost reductions for broadband service in Sierra Leone. Experience elsewhere in Africa suggests that connecting a country to a submarine cable in the presence of a competitive environment can reduce broadband prices by as much as 75 percent. Based on current bandwidth use, and assuming that services are currently costing customers about US$500/Mbps/month, Sierra Leone's current annual satellite bandwidth cost of about US$4.2 million could be expected to drop to about US$540,000 as a result of participation in ACE.[17]

In addition, new growth theory documented by OECD has identified that fast internet boosts the productivity of firms in addition to generating employment opportunities. Analytical studies have shown that firms using standard broadband (defined as connection speeds above 256 Kbps) were on average 10 percent more productive than firms using dial-up internet access. Faster internet speeds are also reported to be causally related to increased employment with analysis showing that for every one percentage point increase in broadband penetration within a region, employment increases by 0.2-0.3 percent per year for the private, non-farm economy.[18] The results of these studies support the hypothesis that broadband penetration enhances economic activity. Sierra Leone has learned from its own experience that sector liberalization, investment and private participation in the telephony sector can deliver growth and jobs. Government therefore has every belief that this formula can be replicated with benefits not just for growth but also national unification and regional integration for the nation.

## CRITERIA 2 & 4: PROVISION OF BROADBAND CONNECTIVITY PERMITS DIVERSIFICATION

### INFORMATION TO FEED MARKET DEVELOPMENT

IT platforms can be developed to feed information flows in a manner that help markets to function and release greater productivity and efficiency. Taking the agricultural sector as an example, IT connectivity can enable better exchange of information on commodity prices, transport availability, the matching of buyers with sellers, the overall effect of which will be to stimulate market efficiency, reduce costs of transacting business and improving competitiveness.

### STIMULATION OF SME AND TOURISM SECTORS

Revenue generation and job creation can also be expected in SME sector and in the tourism sector, both of which will gain greater access to markets and customers by being better able to display their offerings to the market through presence on the world-wide-web. With regard to tourism specifically, this industry can expect to gain direct value from being able to move from passive to interactive connectivity with prospective customers. It is a well established fact that customer preferences and habits in holiday tourism have been tending away from use of travel agents towards self-directed travel planning aided by the internet. This requires websites which are more sophisticated and accessible than those currently available from Sierra Leone businesses, and ones which are backed up by better interactive capability.

16 World Bank Appraisal, page 9.
17 World Bank WARCIP Appraisal, Ibid, page 23.
18 Cited in WB WARCIP Appraisal, Ibid, (Crandall et al, 2007), page 61.

## CRITERIA 3: BETTER CONNECTIVITY CAN DRIVE BETTER INCLUSION OF MARGINALIZED GROUPS

Accessibility of internet services across the entire country will reduce dislocation between urban centers and the hinterland. The sense of isolation and alienation in the rural areas was one of the factors contributing to the decade of conflict and it was compounded by a feeling of inequality dividing the two population segments.

The potential resurgence of a rural-urban divide has remained a vital concern to the GOSL but by ensuring that conditions are pursued to enable delivery of internet services to "the last mile," public perceptions in this realm can be better managed. Better yet, rural ICT penetration will be accompanied by improvements in rural electrification. Improved density of coverage and access to both will serve to help the rural population feel cared for and catered to. Benefits to the entire population will accrue on a number of fronts, including government services, economic growth and social gains.

### VOIP TELEPHONY

Voice over internet protocol telephony will introduce cost reductions in voice services and this will yield a mix of financial and economic impacts. Financially, it will likely exert a dampening effect on the revenues of mobile firms unless they innovate to position themselves as providers of VOIP subscriptions. Economically, cheaper more accessible voice services will improve the ability of Sierra Leoneans to conduct business across borders and the rate of use will increase as will the level of integration within the regional economy.

### POTENTIAL APPEAL TO YOUTH

Another aspect which deserves consideration is how growth in the ICT sector might appeal to unemployed youth. As was noted in chapter one, Sierra Leone has a generation of youth who lost out on education and who have been dislocated from agriculture and the rural economy and are now quite attached to an urban existence. Policy-makers know that there is not much chance of making direct involvement in farming an attractive livelihood to this segment of the population and, instead, they are more likely to develop their own jobs.

This is why trade in agricultural products could become relatively more attractive and the same logic is applicable to livelihoods generated from ICT sector growth. Whereas it is not realistic to imagine wholesale conversion of urban youth into IT experts, it is indeed plausible that the ancillary jobs created by ICT penetration will have greater appeal and growth in this sector gives a greater degree of promise for the absorption of idle youth.

### GREATER POTENTIAL TO REACH THE UN-BANKED POPULATION

Improved ICT accompanied by a sound regulatory regime should also introduce benefits and efficiencies to the financial sector by facilitating payments, reducing the cost of financial transactions and making it possible to bring more of the "un-banked" population into the commercial economy.

### E-ENABLED EDUCATION

Sierra Leone is currently making a major effort to improve the educational standards in the country both by increasing attendance by girls as well as boys and by expanding the cadre of teachers in schools. Digital distribution of training and teaching materials to teachers is presently a long way off, but ICT can help make this happen in the future and will certainly enhance the capacity of the Ministry of Education to keep the educational curriculum connected to world events so that it can evolve as appropriate. The provision of a national terrestrial backbone will make it possible for the NGO sector and development partners to participate in the build out of rural connections and to contribute to the development of applications which serve the educational needs of the population.

### E-ENABLED HEALTH SERVICES DELIVERY

The health sector can also improve service delivery and lower costs by relying on ICT to expand the reach of health sector practitioners. For example, South Africa and India have both developed extensive e-diagnostic support systems connecting a small pool of doctors with a larger cadre of medical practitioners.

In such systems, medical practitioners provide a direct point of contact with patients to observe and communicate symptoms, administer tests and send data up the chain; doctors interpret symptoms, order tests, perform diagnosis and provide instructions on interpret treatment regimes; practitioners dispense medicine and maintain contact to monitor patient progress. This kind of potential becomes more feasible in Sierra Leone with the advent of ICT and rural electrification.

### IMPETUS FOR IMPROVEMENTS IN ADULT LITERACY AND NUMERACY

One of the barriers to greater penetration of ICT is, in fact, the low levels of literacy which currently pervade the rural populations of Sierra Leone. While this is an obstacle, it has also been observed (in Afghanistan for example) that the increased availability of telephony and internet telephony can result in stimulating bottom up demand for literacy. Rather than need to push literacy campaigns on reluctant populations, the dynamic changes and demand becomes a pull, making it much more possible to broadly promote an upgrade in adult literacy.

## CRITERIA 5: BETTER INTERNET IMPROVES THE PRIVATE SECTOR ENVIRONMENT

### IMPROVEMENTS TO THE INVESTMENT CLIMATE

Businesses require information and connectivity in order to function and the lack of good communication systems presents either a high cost or an efficiency impediment to private sector investment. When private operators decide to invest in a given location despite limitations in ICT

infrastructure, they often establish self-serving networks to meet these needs anyway, erecting dedicated and costly substitute systems such as satellite enabled telephony and internet connectivity. A good example is provided by Sierra Leone's banking sector that, at present, has established a private satellite line at a cost of about $6000 per month to serve the needs of approximately six banking institutions situated in Freetown. The erection of a metropolitan backbone will reduce their costs and will also make it possible for them to take better advantage of technology enabled banking services than was the case before. The mining sector represents another industry in which the companies are currently obliged to erect single purpose satellite connection stations at rural mining sites to meet their communications needs. With a better terrestrial backbone in the future, mining companies will have the option of building incremental cable links between the backbone and their locations and this will undoubtedly provide better value for money as compared to the current solution. A functioning ICT environment supported by competition in the local market will likewise improve the attractiveness of Sierra Leone as an investment domain by reducing the ICT cost of local operations. It will certainly help when foreign investors come to explore the local potential by enabling them to stay connected when in country. It will also help the global competitiveness of the tourism industry better by enabling its holiday tourism visitors to stay connected when in the country.

### BUSINESS PROCESS OUTSOURCING

Some countries have been able to position themselves as hospitable locations for the supply of out-sourced services and business processes such as call centers, thereby generating a good deal of direct job creation to deliver customer service support on behalf of industries located in higher labor cost environments. Examples would be call centers serving the airlines industry, insurance and banking or the like. While Sierra Leone's literacy levels work against the realization of this benefit in the short term, the low relative cost and excess supply of youth labor might combine to develop this outlet in Sierra Leone in a medium to longer term time frame. Over the medium to long term, global businesses will continue to search for lower cost operating environments in which to situate BPO operations and Sierra Leone has every interest to develop its human capital to take advantage of this potential.

## CRITERIA 7: ICT CAN IMPROVE GOVERNANCE, STABILITY AND A SENSE OF NATIONAL UNITY

### NATIONAL TRANSPARENCY AND ACCOUNTABILITY

At a national level, Sierra Leone has recently passed its Freedom of Information Act and is keen to improve the transparency of government and accountability to the public. ICT is an essential tool for disseminating information proactively and responding to FOIA inquiries when they arise. Concurrently, better connectivity will improve government delivery of a whole range of public services including health, education, food security monitoring and agricultural sector extension which, in sum, will contribute to the all important goal of poverty reduction.

### CITIZEN PARTICIPATION

On the demand side, an improved network has the potential to strengthen the participation of citizenry within political consultation processes and the connections between government, media and civil society institutions. ICT can undoubtedly improve people's participation in public decision-making processes, helping strengthen the demand for improvements of public accountability.

### EMERGENCY COMMUNICATIONS NETWORK WILL SUPPORT STABILITY

One of the observations made about Sierra Leone's decade of conflict is that government had poor information about emerging threats and evolving conditions on the ground and this, together with poor road infrastructure made it extremely difficult for the armed forces to intervene in an effective manner. Improvements in communications infrastructure are expected to allay this weakness as, for added measure, an emergency communications network will be established to ensure that government has a reliable and dedicated source of connectivity of its own for use in emergency situations. This network would not be affected by other conditions affecting service on the general mobile network, such as over-loading and network congestion. As such, improved ICT will support the government to better safeguard the security and stability of the nation to internal or external threats in the future.

## CRITERIA 6 & 8: REGIONAL CONNECTIVITY CAN RAPIDLY IMPROVE INTEGRATION

### ICT GAINS CAN BE REALIZED QUICKLY

Conditions are ripe for Sierra Leone to reap the gains from added investment in ICT for a number of reasons. Internally, the country's liberalization of the ICT investment climate has elicited a good deal of inward investment and as long as the country proceeds with the de-monopolization of the international gateway, further private investment can be expected to build out private networks and a substantial customer base by the enterprises participating in the sector.

On the external front, ECOWAS is ready to promote a virtual private network that will serve the economic community (ECOWAN) and Sierra Leone merely needs to keep up with advanced preparations well underway. At the same time, Orange Telecom has assembled a large consortium that will sponsor the establishment of a fibre-optic cable that will deliver internet connectivity around the Western side of the African continent and Sierra Leone's rapid response to this opportunity means that the digital divide can be closed early in 2013, with multiplier benefits available to the economy soon thereafter.

## REGIONAL COLLABORATION THROUGH E-GOVERNMENT

ICT enables e-government systems in support of a myriad of public sector management tasks, both on national and regional planes. GoSL is especially keen on ECOWAN for the boost it will give the public sector to manage its participation in the ECOWAS vision of a borderless region while providing a secure and reliable means of storing and transferring sensitive data between Member States, the Commission and other ECOWAS Institutions and agencies. For example, Sierra Leone's participation in GIABA for anti-money laundering and to prevent the financing of terrorism will be enhanced by an ability to share passport data and financial information. The region-wide effort to stem cross border trafficking in illegal drugs, yet another major threat to stability in Sierra Leone, will likewise get additional traction when e-coordination permits law enforcement entities in the sub-region to tackle this problem together in real time. Better ICT will also enable remote interaction between and among ECOWAS Heads of Governments and agency heads through multi-media applications, making the frequency of contact much greater and vastly improving the sense of community among participants. Finally, the region itself will go through a transformational upgrade as most ECOWAS countries rank very low in e-government applications according to the UNPAN Web Measure Index. This measures the level of sophistication of a government's online presence, based on five stages of e-government evolution (emerging presence, enhanced presence, interactive presence, transactional presence and networked presence) and Sierra Leone can expect to gain by participating in the progression that the region makes on this continuum.

## TRADE FACILITATION AND CUSTOMS ADMINISTRATION

An integrated ICT market could play a central role in enhancing trade by facilitating cross-border payments, the flow of information and support for upgrading the quality management systems that have become essential for global trade in food commodities. The prosperity of ECOWAS ultimately depends on how well it can integrate the region and how well it can connect into the global economy, both of which require a step-change in national and regional trading capacity. In this connection, one relevant benefit e-government will come from deeper application Asycuda customs information software.

Now that this system has been adopted in a majority of countries in ECOWAS including Sierra Leone, its utility can be expanded through common use by MRU states to support cross-border trade and improve the climate for collaboration on this front. Eventually, it will be desirable to extend terrestrial networks to deliver bandwidth to land-border posts where other infrastructure such as common border facilities and improved roads can all aid to facilitate expanded regional trade. With ICT in place along key corridors at a minimum, the entire sub-region will gain greater potential to capture data on cross-border commodity movements, improving the capacity to monitor, learn, incentivize and structure inter-regional trade. With respect to global exports to the EU and beyond, ICT is essential to support measures to upgrade quality management systems and enable Sierra Leone to maintain its status as a supplier into demanding global markets.

Aside from changes in crop husbandry practices, these must be accompanied by data capture so that information on the conditions of production, quality of output and traceability of origin can be reported up the line. In effect, more information is required all along the production chain, to certify for example that production has not relied on child labor, that environmentally sensitive integrated crop management (ICM) or integrated pest management (IPM) has been practiced, that levels of chemical residues are of acceptable level and so on. ICT infrastructure is thus essential for this purpose, and it must extend into the rural areas if Sierra Leone is to maintain or enhance its competitiveness in crop exports to demanding markets.

## CLOSING THE DIGITAL DIVIDE IS ATTRACTIVE BUT CARRIES RISKS

Chapter three will present in detail the planned investment in Sierra Leone's ICT sector. Meanwhile, the paragraphs above make it clear that measures which reduce the digital divide and keep Sierra Leone behind the rest of the world will have more than economic impact. The socialization potential of the internet is also tremendous. The digital age has shown the power of the internet tool to have profound capacity to deliver social change by exposing isolated areas to new ideas and enabling their participation in the global matters. This can work for good cause but it can equally be harnessed for negative or destabilizing purposes. The recent events in North Africa and the Middle East make it clear that better internet connectivity aids with communication for the purpose of mobilization around a given cause. Where a government remains vigilant about citizen participation in democratic processes and attentive to public sentiment, this convening power does not pose the same threat as in repressive or autocratic societies. Fortunately, Sierra Leone has demonstrated that it can move through a cycle of political change in a peaceful manner and its initiatives towards transparency in governance and measures to promote freedom of information are positive. At the same time, it should be recognized that the presence of better internet moves the dynamic of such measures from the domain of government controlled "supply" to collective public "demand" and the pressure for accountability will increase. GOSL will need to be ready for this and will need to continue implementing measures that advance the nation's maturity as a democratically governed nation. Government can expect, for example, that measures to control corruption will gain greater scrutiny and these must be deemed genuine in order to maintain public support. At the same time, it is important that revisions to current legislation provide for balanced measures which enable the potential ICT-enabled threats to be countered in a responsible manner.

### RELEVANCE OF POWER SECTOR INVESTMENT TO ICT NETWORK EXPANSION

The availability of electrical power is, ultimately, an essential ingredient to permit full scale build out of a national terrestrial backbone. The relationship between power supply and penetration of internet service into the interior deserves mention. At present, Sierra Leone does not have a national grid for the delivery of power beyond Western Area. It is possible, however, to make do with solar energy to provide power to permit the installation of WiMAX wireless equipment through which wireless internet can be offered to rural citizens and institutions. This is what is being planned in the short term. Fibre optic cable will be buried alongside main roads since there are presently no power lines on which to piggy back internet cable. In the medium to longer term, however, the terrestrial expansion objectives bring to light the valuable synergies that could exist and should later be pursued between power sector development and expansion of the internet terrestrial backbone. This in turn raises the relevance of Sierra Leone's participation in the West Africa Power Pool.

At a regional level, the WAPP network will provide more advanced countries an added and unique opportunity to expand the regional ICT transmission network off the back of their existing WAPP power lines. In this respect, WAPP infrastructure supports a regional backhaul network that gives the region a terrestrial backbone on which to penetrate the heartland the interior of ECOWAS with the benefits of connectivity.

As a more recent member of WAPP, Sierra Leone plans to participate in a next-generation power inter-connection project to establish transmission lines across the sub-region as described in the accompanying box. However, as is the case with other infrastructural developments in the region, Sierra Leone is a relative late-comer and the CLSG project is envisaged to reach commissioning stage at 2013, about two years after the ACE submarine cable has been landed. Sierra Leone thus needs a solution for laying fibre optic cable in the interim and this explains why the country has developed an alternative approach to rely upon solar generated power electricity for interior delivery of internet connectivity. This enables Sierra Leone to proceed quickly in building the up-take of bandwidth for which it will be paying as a member of the ACE consortium (and avoid paying for unused capacity) but the acceleration of terrestrial connectivity comes at sizeable cost premium to the alternative of piggy-backing installation on power lines. The draft feasibility study for the Backbone Route identifies the cost of laying cable at $25,000 per kilometer, or $15.25 million for the 610 km planned in the first phase. In contrast, the appraisal for the submarine landing station estimates that retrofitting existing power lines with Optical Ground Wire would cost other ECOWAS states about $15,000 per kilometer or a country like Sierra Leone a marginal cost of only $7,500 per km because it will be installing new lines. As the piggy back approach would imply 30% of the cost of burying cable along road-sides, it makes sense for Sierra Leone to maintain pace with implementation of the CLSG WAPP Interconnection project and, as soon as possible, consider switching installation to above ground power line usage to implement downstream phases in a lower cost manner. Eventually, expanded rural electrification will ultimately foster the expansion of downstream benefits that can accrue from internet connectivity as businesses, institutions and individuals will rely on it to provide a reliable supply of power to charge and connect their communications and computing devices to the fibre optic cable network.

# 6. Promising growth area 3: Regional mining corridor development

This growth strategy asserts that Sierra Leone has the option of managing the evolution of its industrial mining sector back to back with supportive cluster development along spatial corridors and mineral zones formally designated as such within the MRU. This is an ambitious vision which requires extensive up-stream visioning, planning and regional coordination. It requires the wisdom to forestall the short to medium-term flow of benefits from a solely "extract-and-export" enclave mode of mineral sector development and replace it or supplement it with a more patient but regionally coordinated growth triangle approach. The latter approach would require broader area development around zones that contain the presence of high bulk, low value minerals, justifying concurrent investment in larger scale infrastructure to enable its extraction and export to ports or to more centrally located transformation centers. It would induce the participating nation-states to contemplate the benefits of regionally conceived infrastructure networks instead of purely national networks so as to introduce efficiency and cost reductions that tap the advantage each country can contribute to corridor development. For instance, Sierra Leone and Liberia can offer Eastern Guinea closer access to locations where seaports could be developed for bulk export of minerals compared to the alternative of transporting minerals all the way across country to Guinea's coastal territory in the West. Reciprocally, substantial power required by mines or mineral transformation in Sierra Leone and Liberia could choose to prioritize reliance on power generated in Guinea and supplied through WAPP transmission lines to locations in their

respective territories. The premise of this growth option is that installation of improved power and roads, rail and port transport infrastructure for mining sector development would catalyze other economic activities along the corridors and would be sized in order to serve multiple users. Furthermore, the region's exceptional endowment in mineral resources could be pursued with the objective of attracting FDI for greater mineral transformation within the Union and usher in downstream potential for manufacturing industry in this part of the continent. If the MRU states were to choose a collective approach to realizing this vision, they could re-position the fragile fringe as a hospitable investment zone for mining and downstream industry and more quickly close the gap between Union States and other ECOWAS states which have moved further along the development curve.

This vision requires the imagination and patience to foresee the greater national and regional good which would come from a strategy of mobilizing significant investment along corridors that link Sierra Leone, Guinea and Liberia in a fair and economically viable manner. It requires trust and faith between neighboring states and in the ECOWAS vision "for a sub-region without frontiers, where the people have access to the enormous resources and enjoy them, by creating opportunities of sustainable production and jobs, in the framework of equitable distribution systems."[19] Unlike the agricultural sector, minerals represent a type of "inheritance" which is a non-renewable resource that will eventually be depleted. Yet, unless extractive industry is developed with due care to establish downstream industrial linkages, with due regard to distributive impacts and encompassing measures to multiply indirect contributors to economic growth, sector development could bring many negative consequences and externalities. At the same time, the extractive sector has too much potential in Sierra Leone to be ignored and a failure to control the cautious development of this sector could re-ignite conflict internally or within the region. Consequently, the growth potential of Sierra Leone's mineral sector bears further consideration in the context of the region's endowment, and the country deserves the support of its development partners to develop the sector further.[20] This section begins by presenting the rationale for a regional approach to developing the economic promise of Sierra Leone's mining sector. It then examines the issues of economic clout, inclusion, potential for economic diversification and how attention to governance matters is essential to enhance national unity and regional integration. It also contemplates the risks which mineral sector development could present to Sierra Leone and its neighboring States.

## CRITERIA 8: MINING PRESENTS AN INTRINSICALLY REGIONAL DEVELOPMENT OPPORTUNITY

### MINERAL RESOURCE ENDOWMENT SPANS THE SUB-REGION

The Mano River Union states of Sierra Leone, Guinea and Liberia are each mineral rich in their own right but poor in infrastructure and low on the human development scale. Whereas each country could continue on separate paths to develop the potential of national mineral deposits, the nations' respective governments are encouraged to consider the benefits that an alternative, regionally integrated development approach could offer. The proposed corridor development strategy favors an emphasis on extraction and transformation of non-precious bulk minerals because these require entry of FDI and enhanced development of the formal industrial mining sector. Attraction of greater flows of FDI is highly plausible because MRU countries have multiple mineral deposits located within their respective territories as well as some near each other or spanning across their borders. The high tonnages indicated could support long lived mining and mineral processing projects which, in turn, create the justification for larger scale investment in region-wide infrastructure such as port, rail, power and roads. At present, most mining operations are conducted on an enclave basis and are required to invest in associated infrastructure for their own single-use purpose. At present, for instance, Sierra Leone obliges its concessionaires to meet many infrastructure-related investment costs and this likely implies that such investments are taken on a least cost basis at the required minimum scale in order not to divert from potential private returns. The trade-off from this style of self-sufficient enclave development is that the country must provide incentive schemes to investors that reduce fiscal receipts and may be less needed if there were greater public participation in multi-use infrastructure.

An alternative to the self-sufficiency approach would be to develop infrastructure to serve multiple users and economic purposes including mining sector customers as anchor users. By its very nature, infrastructure presents a long lived type of investment which is best coupled with opportunity offering economic returns over a lengthy time period. This is the combination which makes a mineral-infrastructure cluster development strategy so attractive for MRU states.

The logic above explains why the emphasis for this growth strategy centers on large scale industrial development and does not emphasize Sierra Leone's artisanal mining sector as the center of focus.[21]

Although Sierra Leone has a long history of diamond mining and recent substantial discoveries of gold, the extraction of high bulk minerals is actually in a fairly nascent phase in the country with the exception of rutile. Many bulk mineral deposits have recently been discovered in Sierra Leone and in the region and more are expected to be identified as the nation develops its internal capacity to detect and evaluate the nation's geophysical endowment.

19 ECOWAS Strategic Plan, 2007-2011.

20 UK DfID and The World Bank are both presently helping GoSL to develop policies and plans for mineral sector development, but other partners and funding sources will be needed to help finance the extensive investment in road, rail and energy infrastructure needed to better tap the potential of this sector.

21 Nonetheless, if managed properly, expansion of industrial mining could present a beneficial sequel to the artisanal mining era since the latter is in decline with surface deposits being largely tapped out and an inevitable reduction in the number of livelihoods it can sustain whereas job creation will be generated in the industrial sector.

Between 2007 and present, the African Minerals mining company identified and confirmed existence of a world-class reserve of iron ore, estimated initially at 2.8 billion tons in Tonkolili District and now reportedly estimated to contain 11.7 billion tons. If these estimates are accurate, Sierra Leone is sitting on one of the largest iron deposits in Africa or the world. In addition, there is a 55 km wide metamorphic belt rich in high-grade bauxite which runs from Moyamba to Kambia across the southern tier of the country towards Guinea with proven reserves of 78 million tons and estimated potential for another 100 million tons in the area near Port Loko. These finds are in addition to recent discovery of substantial gold deposits in the Eastern province of the country adjoining areas that span across the border into Liberia where that country has also licensed and re-launched a number of gold mining operations. Meanwhile, bauxite reserves have long provided a major contribution to Guinea's economy with mining activity accounting for 20 percent of GDP and 94 percent of exports in 2010. FDI flows into Guinea's bauxite sector are substantial given that the country is estimated to hold 24 percent of global bauxite reserves with all of the world's biggest players (Rio Tinto, BHP Billiton, Alcoa/Alcan and RUSAL) all having a presence in the country.

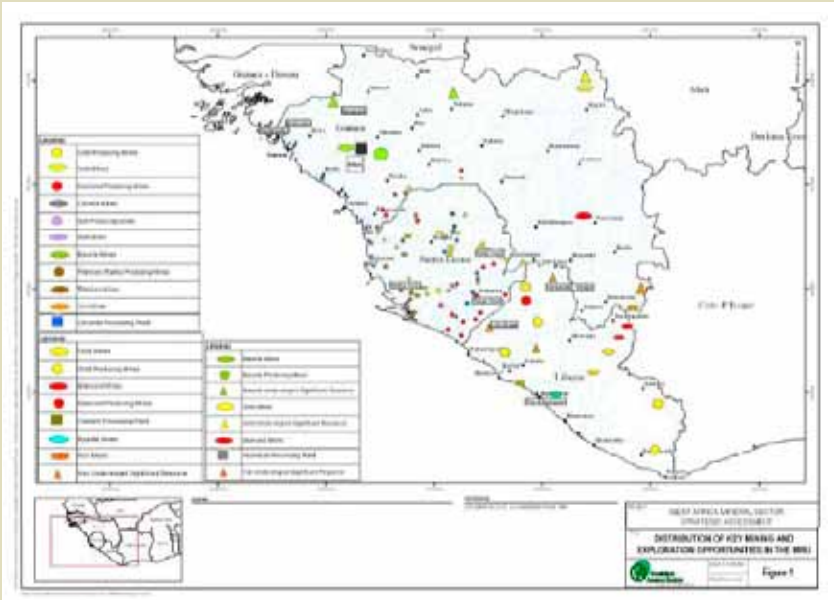
A closer look at the confluence of mineral deposits within MRU countries and across their borders has led to the concept that mining-infrastructure clusters could present an attractive corridor development opportunity for Union countries.[22] Figure 2.9 reproduced from the WAMSSA report offers visual depiction of the extensive mineral related activity already underway in the wider sub-region. On the one hand, this diagram suggests that infrastructure investments across the sub-region could be planned with the intention to benefit many mining initiatives. On the other hand, this figure demonstrates that there are already many mining projects and exploration activities underway. Each country is moving quickly ahead to cut deals with the world's large mining companies for specific mineral extraction or transformation projects. To the extent that concluded deals include provisions for self-sufficiency in infrastructure, or deals include development of infrastructure which simultaneously serves the mine and the community (to remove local communities from their relative isolation via road links, power for the community and the like), the current portfolio of planned investment could work against a regional approach to mining corridor development. This analysis recognizes therefore that the mining sector in the sub-region is highly dynamic and, not knowing the terms of all existing mining deals, does not try to prescribe highly specific infrastructure projects. It aims instead to articulate the reasons why there would likely still be value for Guinea, Sierra Leone and Liberia to consider how they might share the investment burden and economic rewards from a more inclusive approach to mineral-infrastructure cluster development. For this purpose a mineral-infrastructure cluster is identified as any location where mineral deposits are situated in close enough proximity that with proper planning they could be serviced by common transport and power supply arrangements. This would allow for mines to become the catalyst for public-private sponsorship of larger scale multi-use infrastructure, allowing for ancillary economic activities with upstream and downstream links to develop, contributing to the sustainability of the infrastructure beyond that supported by a mining project alone.

WAMSSA analysis identified three particular mineral-infrastructure clusters that would benefit from collaborative approaches to rail, port, power supply and road transport development, including:

- Iron ore deposit clusters in southeastern Guinea plus Nimba and Lofa counties in Liberia near the border with Côte D'Ivoire;
- Iron ore and gold deposits in or near trans-border watersheds and forests spanning Eastern Sierra Leone and Northwestern Liberia; and
- Central Guinea and northern Sierra Leone bauxite deposits which could plausibly be developed separately or together.

Whether it is these three area-specific

**Figure 2.9: Mining and Mineral Exploration Underway in MRU States**



22 West Africa Mineral Sector Strategic Assessment: An Environmental and Social Strategic Assessment for the Development of the Mineral Sector in the Mano River Union, Report No. 53738, World Bank, March 31, 2010 page 42.

zones or the larger tri-nation area that is considered, the MRU countries are encouraged to consider how a regional approach could, with better planning, do more to address the existing gaps in large scale rail, road, port, power and ICT networks that plague each country. While these could be developed to serve anchor customers in the mining industry, they would also serve to bring the surrounding areas and communities out of isolation and into the economic mainstream of ECOWAS.

## REGIONAL CONSTRAINTS FAVOR COLLECTIVE ACTION

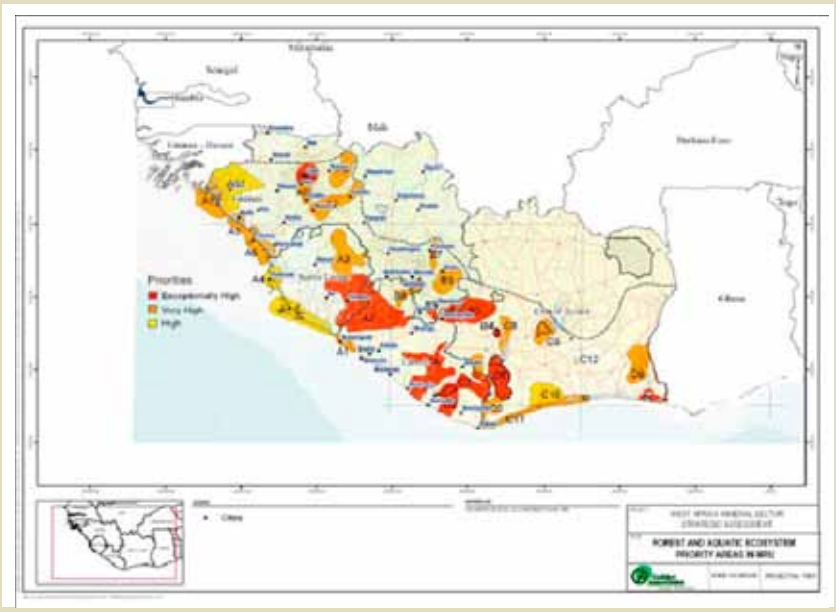
In order for the minerals sector to be developed in the manner described above it is essential that the benefits to each nation of a collective approach outweigh the benefits from independent approaches. In this regard, it is important for each country to begin by identifying the goals and objectives that serve their national interest. Sierra Leone, for example, has expressed the view that they have been upstream focused on licensing and exploration for too long and they now wish to move towards mid and downstream stages of development to actively embrace transformation in order to add value to mineral products. This will require direct foreign investment and simultaneous establishment of the infrastructure that can enable downstream operations. In this regard Sierra Leone embraces the idea of mineral corridors with shared infrastructure and expresses a willingness to make its deep water port available to benefit potential users from Guinea. GOSL aims to attract investment in an iron smelting operation to begin iron pelletization. In 2014-15 they aim to develop a seaport at Sulima near Zimmi and the Liberian border. This could likewise serve an Eastern mining corridor and provide a service to all three countries. They likewise realize that their road networks need upgrading and resurfacing in order to cater to the greater weights that would accrue from expanded transport of bulk minerals to ports and transformation sites. On the softer side, GOSL acknowledges that Sierra Leone has the same geological structures as Guinea and Liberia and believes there should be a geological information platform developed and shared between the countries. In addition, the country needs to place its geological science graduates in academic centers which allow them to go for specialized, advanced training and it also has a need for trained mineral economists capable to guide government negotiations in the development of contracts. Sierra Leone presumes the same challenges face other MRU and ECOWAS States and would be interested in regional cooperation to tackle some of these together.

Sierra Leone has begun holding talks with Guinea and Liberia about distinct and shared mineral sector development objectives which will enable areas of intersection and shared regional interest to be identified and clearly articulated to domestic constituencies as well as the business community. The existence of shared regional interest, including stability interests as well as economic and social development objectives are important to enable national leaders and sector champions to remain secure in presenting a unified approach when reaching terms with the private sector in downstream negotiations. Such negotiations will arise whether they pertain directly to mining activities or to supporting activities such as infrastructure investment. When tradeoffs have to be made regarding spatial location, ancillary uses, sizing and relative priority, it is helpful to know that the collective national and regional interests are being served. One critical aspect to be considered is the extent to which mineral sector development in MRU countries will create or exacerbate trans-border environmental impacts. Preservation of the Upper Guinea Forest Ecosystem is vitally important as a biodiversity conservation area. This ecological zone extends from Guinea through Sierra Leone and Liberia eastwards into Ivory Coast, Ghana and Togo. It is rich in species including about 7,000 plant species of which 1800 are considered endemic, 75 endemic bird species and is home to about 30 distinct primate species of which six are endemic to Upper Guinea forests. As an intact eco-climate, the region's preservation is vital to climate stability in the region and also ecotourism even though mineral deposits are known to be located nearby and inside protected forest areas. Figure 2.10 identifies that the sub-region encompasses a large number of conservation areas, some of which are considered to be of exceptional importance for the preservation of biodiversity. Meanwhile, some protected areas are under threat from mining or may increasingly feel the pressure to permit the development of mineral deposits.

Where compromises are made to favor mining development over conservation, the impact on fauna, flora and water resources will have an impact on all parts of the ecosystem and will, by definition, cause impacts across borders. Mining can also cause water pollution in trans-boundary watersheds and mining induced migration. Conflicts over land use could also be anticipated, especially where artisanal mining may still be underway. There are thus social consequences of industrial mining development that the region must anticipate and prepare for. These considerations explain why social and environmental impacts would be better addressed in a regional context than by each country independently. By taking a regional approach, all of the countries can bolster each others' resolve to preserve the forest ecosystem on which they and the larger West African region are dependent and joint measures to manage population shifts in constructive ways can help to avoid ignition of local conflicts and wider contagion.

The ECOWAS mining sector directives are relevant and bear citation in the context of endorsement for a regional approach. In May 2009, the ECOWAS Council of Ministers adopted Directive C.DIR 3/05/09 on the Harmonization of Guiding Principles and Policies in the Mining Sector. Member States have until July 1, 2014 to adopt the necessary measures to comply with this directive. The suggestion here is that Sierra Leone, Guinea and Liberia make use of the next three years to comply with the directive and implement a joint Action Plan that brings greater synchrony between

**Figure 2.10: Priority Areas for Forest and Aquatic Ecosystem Conservation in MRU**



their respective policy frameworks and infrastructure plans. Policy harmonization has recently been pursued especially in the fiscal sphere. Complementary and essential reform measures are likely in order, including development of harmonized regulatory frameworks and capacity building for regionally-synchronized approach to sector governance. The main deficiencies of sector management have been identified to include the following[23]:

- Contract awards and licensing: weak mineral development agreements that do not yield revenues commensurate with potential;
- Weak mining cadastre: insufficient geological data to enable holistic sector planning;
- Poor environmental planning: significant environmental and social impacts of mining are not being addressed in an adequate manner;
- Fiscal regime and tax collection: the current regime is regarded as non-transparent and inconsistent with international best practice;
- Revenue distribution; currently there is little beneficial impact by mining activities on the economic development of the country.

One major objective in the short term is for Sierra Leone to meet the compliance standards under the Extractive Industries Transparency Initiative (EITI) as this will reduce the barriers to investment, especially by ethical companies within the global industry. Liberia has been able to gain compliance and could provide help and guidance to its MRU neighbors on how to tackle the troublesome aspects. By raising the internal bar on ethical and transparency standards and presenting a united front across the MRU to the outside world, an EITI-compliant fragile fringe would begin to look very different to the investment community.

## CRITERIA 1 & 2: CURRENT ECONOMIC CLOUT VERSUS THE GAP IN POTENTIAL

Table 2.4 rates the criterion of GDP contribution from the mining sector as "low" but the potential to address a gap as "high." GDP size and growth data presented in Figures 2.2 and 2.3 further identify that the entire mineral sector been contracting in recent years. At present, the mining sector includes three sub-sectors—artisanal mining of precious stones, industrial mining of precious stones and industrial mining of base metals. Despite its previous status as an important generator of livelihoods, artisanal mining is most definitely in decline due to depletion of surface level diamond supply and it will continue going down. The potential of industrial mining of bulk and precious minerals diverges however, epitomizing the difference between current versus assessed potential. The paragraphs above on mineral deposits and recent finds indicate that the future potential of industrial mining is promising as long as governance issues maintain a harmonious development path for the industry. This explains why the sector is considered to offer substantial economic clout as a promising growth area for the future. Without even considering the supplemental economic benefits that might accrue from oil and gas production and from intermediate industrial transformation, the World Bank estimates that "the value of mining exports could rise to as much as US$1.2 billion in year 2020, adding 1.2 percent additional annual GDP growth and US$250-500 million per year [in government revenues] through 2020."[24] A new revenue stream on this order of magnitude would be a tremendous boon for Sierra Leone with huge potential to lift the country out of poverty in the medium to long term if the proceeds were allocated wisely. GOSL estimates are that it would be reasonable to expect that Sierra Leone could retain around 7% of the value of mineral exports as Government revenue through:

- Increased average royalty rates whereby new projects will pay newly legislated royalty rates, as compared to the concessional rates made available to rehabilitated mines;
- Greater mine profitability, as existing mines mature and costs are fully recouped;

23 Project Appraisal Document for Proposed Grant to Mining Technical Assistance Project, Nov 3, 2009, World Bank.
24 MTAP Appraisal, Ibid.

- Significant indirect taxes derived from large-scale operations including salary taxes, import and excise duties, service charges and the like.

## CRITERIA 3: INCLUSIVENESS IN THE ECONOMY

Again, Table 2.4 ranked the mining sector as "low" on the inclusiveness scale reflecting the fact that the sector has been a source of extreme societal polarization in the past. Industrial mining has provided livelihoods that situate participants at the high end of the wealth-poverty continuum (Figure 2.4) but participants in the informal artisanal sector have fared poorly, increasing the degree of direct conflict between social strata participating in mining activity. This ranking serves as a stark reminder that it is essential to govern the sector with deliberate attention to inclusion objectives going forward and the salient issue becomes one of how the sector's development strategy addresses these. For instance, the African Minerals development of the Tonkolili iron ore mine has the prospect of employing more than 10,000 Sierra Leoneans during the life of the project and that would make it the country's largest employer. But this should not be the only inclusion benefit generated by their presence in Sierra Leone.

Instead, the mineral-infrastructure strategy identified above would do a better job of serving the inclusion purpose because it would create indirect jobs via installation and operation of large scale infrastructure. By sizing infrastructure for multi-purpose use the potential is spawned for ancillary economic growth from other areas of the economy isolated heretofore. For example, the delivery of power supply into a mining zone could concurrently enable resurrection of agro-processing which would benefit surrounding farming communities. Inclusion must also be addressed directly in the mining contracts signed with companies by including community engagement measures in contracts. African Minerals has been contractually engaged to establish schools and soccer fields and provide vocational training to community residents and GOSL will need to maintain a close watch on their performance and the status of community relations. Going forward, GOSL should strive to make best use of competition in seeking FDI and should evaluate companies' ethical standards and corporate social responsibility orientation when enticing new entrants into mineral sector operations.

## CRITERIA 4: MINING CAN LEAD TO INDUSTRIAL DIVERSIFICATION

The imperative now is for the GOSL to move from "reactive" to "proactive" management of the minerals sector. Reactive management has been the dominant sectoral governance approach to date, whereby exploration licenses are granted to those companies willing to finance the costs pertaining to discovery. Permits granted on this basis (albeit under revised terms conforming to an updated Mines and Minerals Act) include the right to downstream extraction. These naturally deprive the country of eliciting transparent competition for subsequent stages of development.

The prevailing governance approach could also sustain a propensity to engage in corrupt practices. In the future, Sierra Leone wants to be in the position of inviting competition to exploit known deposits, rather than responding to the investment proposals of a single exploration company which has made a find. Neighboring countries would benefit from the same approach. Connected with this, Sierra Leone's intention is to set up a National Mineral Agency that will house the technical ability to do geo-physical surveys, chemical analyses, cadastral surveys and the like, enabling the country to develop an inventory of knowledge about the country's mineral resources in order to gain proactive management of the sector. If such information were shared across the sub-region, which is Sierra Leone's wish, better corridor and downstream industrial planning could result.

If the minerals sector were to be developed back to back with an industrialization strategy, with intermediate transformation via, for instance, pelletization of iron ore or the transformation of bauxite into aluminum, it is believed that the sector could deliver huge long term potential to create jobs, expand trade and provide income.

The Government of Sierra Leone would like to pursue such a strategy. To do so would require huge supply of energy, (on the order of 200 megawatts for a bauxite smelting facility), necessitating sizeable investments in electricity generation and huge in-flows of foreign direct investment. Yet, the reason for a corridor approach to investment is based on the pragmatic recognition that mineral transformation requires vast resource mobilization from both public and private sectors and that a large multinational mining company may be persuaded to invest but will tend to scale its investment to the opportunity presented by deposits which may cross national boundaries and not in a single country alone. Hence, the MRU states might like to consider how they can reciprocally gain from the FDI which will be attracted into each respective country. For instance, perhaps Sierra Leone could supply its bauxite into Guinea's aluminum plants and attract iron ore into the smelter it aspires to establish in return. Such an approach will deliver greater industrialization into the region and, in turn, enable greater potential for specialization and economic diversification downstream.

## CRITERIA 5: MINING SECTOR DEVELOPMENT REQUIRES AND ENGAGES THE PRIVATE SECTOR

The investment magnitudes required for large scale industrial mining are well beyond the capacity of MRU governments and can really only be realized by bringing in foreign capital. For instance, the Tonkolili development scheme is expected to bring in $1.75 billion in foreign investment, a figure that represents about 35 percent of 2010 GDP. These

magnitudes of investment can emanate from foreign government interests or foreign corporate investment, both of which are likely to enlist the backing of global financial institutions for specific project finance. Such flows require continued stability in the region and predictability in the fiscal and policy environment in order to be sustained and generate second generation investment into downstream transformation. At the same time, MRU authorities should recognize that perceptions regarding corrupt practice can differ between foreign cultures and private companies and the countries themselves have every interest to establish and maintain an ethical standard across the region that encourages the entry of entities that adhere to the highest possible standards of behavior. Leakage and corruption charges present a tremendous down-side risk which must be countered through aggressive prevention measures across the MRU, otherwise the entire sub-region would suffer from destabilization which evidence of corruption could otherwise spark.

One aspect of mining sector FDI which should be contemplated and discussed between MRU authorities is that of enclave versus mineral-infrastructure development. It is plausible that private mining companies would prefer an enclave approach to development and it would likely require a concerted stance to encourage the alternative on the part of all MRU states if this attitude is to change in like measure on the private side of mining sector investment.

## CRITERIA 6: THE TIME FRAME FOR REALIZING ECONOMIC GAINS

The industrial mining sector is not one which can deliver early gains. On the contrary, it is best that MRU nations invest due time and care in establishing safeguards and harmonized governance systems to ensure that the region's mineral wealth is tapped to the broader benefit of each nation and the region. The long lived nature of mineral sector and associated infrastructure sector development gives Sierra Leone and its neighbors the opportunity to shape mineral sector development according to a new paradigm—one which envisages value addition through industrial transformation that enhances the competitiveness of the manufacturing sector. This is a tall order. However, it is actually quite urgent to set about creating the systems, harmonized investment climates and public-private infrastructure environments in the present that can support this vision. It remains to be seen whether MRU governments and companies will both accept to move progressively away from license-based enclave operations across the country to a more patient, but ultimately more promising development strategy of inviting industry into the region. Development of the mining sector should be viewed as a long term endeavor, not an urgent horse race, since the mineral endowment which exists will not disappear and will gain greater scarcity value as time goes by. As such, Sierra Leone should consider its absorptive capacity and develop the potential offered by its mining sector at a measured pace that delivers a sustained contribution to the country's rise out of poverty.

## CRITERIA 7: THE RISKS OF MINING SECTOR DEVELOPMENT MUST BE AVOIDED

This section has identified that harmonious and coordinated regional development of the mining sector across the MRU could deliver greater prosperity and poverty reduction in each country and improve nation unity and regional integration in the process. Yet, the selection of this sector as a promising growth sector hinges upon stringent attention to matters of governance with an improvement in transparency, business ethics and an orientation to generate inclusion and distribute benefits across each country and the broader sub-region. Without these conditions, mining sector development presents significant risk. A glance at Table 2.4 highlights the polarized outcome of criteria applied to the mining sector, with criteria split between high and low ratings and no middle ground. The high ratings reflect the potential which derives from the many mineral deposits identified from recent exploration efforts without even considering inclusion of petroleum and gas reserves also identified in the exclusive economic zone off Sierra Leone's coastline. The low ratings serve as a stark warning about the potential dangers of economic growth driven off the back of extractive industry without regard to social and environmental consequences.

While mining operations have potential to generate a large number of formal sector income-generating jobs, these could have the effect of widening inequalities in society if they are not accompanied by other measures to generate a multiplier effect and deliver direct material improvements to communities where operations are located. The phenomenon of a "resource curse" has been made apparent in other ECOWAS neighbors and the propensity of mineral wealth to foster conflict is one that Sierra Leone knows all too well. It is absolutely imperative that mining sector development be accompanied by excellent governance standards and constant vigilance over how the benefits are distributed across the nation to tackle poverty and raise the nation's standard of living. Without accompanying measures it might be best to ignore the potential of the minerals sector for yet another decade ■

CHAPTER 3

# PRIORITIZING INFRASTRUCTURE OPTIONS

# CHAPTER 3


# PRIORITIZING INFRASTRUCTURE OPTIONS

Chapter 1 identified that Sierra Leone's economy recovered dramatically with the advent of peace but that this has begun to slow as the per capita rates of output stabilize at levels achieved previously. The conclusion was that the country needs to find solutions that will enable it to re-energize the economy and gain a second wind to drive growth. The analysis portrayed myriad benefits of regional integration and encourages GOSL and development partners to take further steps to connect Sierra Leone into Africa's wider market and the network infrastructure of ECOWAS. Chapter 2 identified **three areas of particular promise within the economy** which, if enabled to address their binding policy, structural and infrastructure constraints, could be expected to catalyze new momentum in economic growth.

**These areas include agricultural crop production stimulated by global and regional engagement in trade, ICT and development of industrial mineral-infrastructure corridors**. It cautioned however that growth does not come without risks, especially in the extractive industry sector, and that GOSL should continue to pursue a growth strategy that emphasizes inclusion, delivers pro-poor growth and reinforces national and regional stability. It also indicated that support of the three promising growth areas would need to differentiate between regional versus global directions of export trade as each is constrained by different deficits in infrastructure.

This chapter 3 turns to developing support packages (hereafter referred to as "scenarios") which redress the set of constraints, including infrastructure deficits and sector reforms which are holding back growth in the areas of promise.

It examines the medium and long-term infrastructure development plans of the Government and identifies the sub-components included therein with greatest potential to mitigate constraints. It starts by looking at GOSL's own plans in all infrastructure sectors relevant to the promising growth options identified in chapter 2. Where sector development plans are not fully developed, are still at a conceptual stage or are deemed to require enhancement in order to effectively relieve binding constraints to growth, this chapter presents logical infrastructure solutions and puts forward plausible investment scenarios without cost estimates that merit further consideration by GOSL and its development partners. In total, chapter 3 calls for selective identification of infrastructure expansion over the next two decades which, with development partner assistance, would be affordable for the country and would enable Sierra Leone to overcome the serious deficiencies it has within power, transport, trade, irrigation and communications sectors.

Cost estimates have been identified in order to address the gaps in roads, trade, ICT and power sectors whereas estimates are still needed for investment in rail and river transport, irrigation, port upgrading as well as the Freetown hub development program. Government is encouraged to develop longer term infrastructure plans that would address key bottlenecks in these areas, along with rough cost estimates where feasible. These would be helpful for informing the ECOWAS Commission, EBID, Africa Union, NEPAD and their respective planning units about Sierra Leone's desire to be an active participant in the long term regional infrastructure development being prepared today for realization in the future. Such information would be equally helpful to development partners with regional programs including, for instance, the EU, The World Bank and African Development Bank. Concurrently, development partners are encouraged to consider how they could help GOSL with feasibility studies, financing and implementation plans to advance the overall development of stability, regional integration and pro-poor growth and help move the nation beyond fragility and into strength.

This chapter develops four infrastructure investment scenarios for Sierra Leone's three most promising growth areas identified in the previous chapter 2:

1. Cash crop production stimulated by global trade;

2. Food crop and agro-processing production stimulated by regional trade;

3. Expansion of the communications sector to reduce the digital divide; and

4. Spatial development of mineral-infrastructure growth clusters embracing regional corridors that require multi-purpose infrastructure development.

**Concept definitions:**

This chapter makes use of the terms **Infrastructure Investment Package (IIP)** and **Accompanying Measures (AM)** each of which has a distinct meaning but which, when combined, offer a comprehensive **"Action Plan"** to release the potential of a promising growth sector. Both the IIP and the AM components are recommended for implementation in synchrony.

**Infrastructure Investment Package (IIP):**

This identifies both the sector of infrastructure that is recommended for a given growth scenario as well as the specific projects planned or the proposed type of projects envisaged. Included within any given infrastructure sector is a provision for maintenance costs which is a critical component for GOSL to factor into all of its future investment planning, especially given that the nation's problem of infrastructure dilapidation comes not only from the decade of conflict, but also from chronic deferral of maintenance.

An IIP is thus scenario-specific and could include a blend of roads, energy and irrigation infrastructure in a single scenario (such as food crops growth) whereas it might include roads, rail and port infrastructure in another (such as mining) producing an overlap in road sector investment required under respective scenarios. When first presented, (food crops growth scenario), Government's total development plans are identified for the given infrastructure sector (e.g. roads) so that the totality of all downstream projects anticipated in Government's sector planning are considered at once. When the scenario develops the cost estimate of its tailored IIP, only the relevant projects are included therein. There are "base" and "option" elements of infrastructure relevant to each growth scenario, so these are designated IIP-B and IIP-O.

**Accompanying Measures (AM):**

Because deficits in infrastructure quality and supply are not the only impediments to performance, this chapter also presents policy, legislative, institutional and sector management reform measures that constitute a set of Accompanying Measures which are recommended for implementation. These are needed to ensure the smooth implementation of the IIPs and to enhance the sustainability and viability of infrastructure investment and should accompany infrastructure investment to more fully tap the latent promise in each growth scenario.

In some cases the "baseline" or "optional" infrastructure 'package'

recommended under the respective scenarios overlaps with that required by other promising growth sectors. While the relevance of the identified package to a given growth scenario must always be explained, detailed repetition is not necessary. For that reason, the material in this chapter is organized around the two key conceptual definitions presented above and is sequenced in a structured manner, both of which deserve explanation at the outset. The sequence of presentation is as follows.

The IIP for each given growth scenario is presented in two parts, beginning with "baseline" infrastructure (IIP-B) deemed essential to unlock sector growth and then introducing "optional" or infrastructure (IIP-O) which is deemed helpful but ultimately less essential and therefore optimal (IIP-O) to achieving the growth promise of the identified sector. Any given scenario may require several types of baseline infrastructure as, for example, global trade in crops which requires an investment in roads, solar energy and irrigation infrastructure. Where this is the case, all of the pertinent types of infrastructure will be considered within the same IIP-B category and the objectives, projects, implementation timeline and proposed institutional arrangements for each will be presented one after the other. Then the IIP-O optional package for each scenario will be considered in like manner.

With respect to the mineral-infrastructure growth scenario, it is not yet known whether river, port and rail sector transport is considered a baseline requirement or optionally desirable, so these are presented as needing further confirmation by GOSL. This depends to a certain degree on whether contracts signed with mining concessionaires will provide for single purpose use or multi-purpose use. At the end of each growth scenario, a comprehensive cost table is presented which identifies the financing targets allocated to government, development partners and the private sector. Likely sources or existing commitments are identified which leaves a current estimate of the net funding gap.

All Infrastructure Investment Packages will be considered in sequence for all growth scenarios in the first half of the chapter. Once all of the infrastructure investment packages have been portrayed, the chapter turns to the identification of Accompanying Measures. Accompanying measures are organized by infrastructure sector and then by growth sector.

Table 3.1 portrays, visually, how the infrastructure sectors and project categories map to all four growth scenarios. This illustrates that certain infrastructure projects will benefit more than one growth scenario: optional elements for a given scenario may be a base necessity for the next scenario and vice versa. The logic of table 3.1 is reflected in the way the discussion of each growth scenario in chapter 3 is structured.

Explanation of Scenario 1 helps to set out the sequence and structure of this approach. Scenario 1 "Investment Infrastructure Package for Stimulus of Global Trade in Cash Crops" (summarized in Table. 3.3) will start with a description of the first baseline infrastructure packages, i.e. "interior trunk roads" and "feeder roads" but not "border trunk roads" within the Sector of "Road Transport".

**Table 3.1: Growth Scenario & Infrastructure Packages Presented in this Report**

| INFRASTRUCTURE PACKAGES SUPPORTING ALTERNATIVE: | | | GROWTH SCENARIOS | | | |
|---|---|---|---|---|---|---|
| **Sector** | **Category** | **Project** | **Cash Crop Global Trade** | **Food Crop Regional Trade** | **ICT** | **Mining** |
| **Road Transport** | Trunk | Interior Trunk Roads | Base | Base | - | Base |
| | Feeder | Feeder Roads | Base | Base | - | - |
| | Border | Border Trunk Roads | - | Base | - | Base |
| **Trade** | Border | Cross-Border Trade Infrastructure | - | Base | - | Base |
| **River Transport** | Variety | River docks, Wharves & Dredging | Option | Base | - | To Be Confirmed |
| **Port** | Freetown | Upgrade QE Mineral Port or Other | - | - | - | To Be Confirmed |
| **Rail Transport** | New Line | ECOWAS Rail Corridor | Option | Option | - | To Be Confirmed |
| **ICT** | Int'l Link | Submarine Cable | - | - | Base | - |
| | Nat'l Links | Terrestrial Backbone | Option | Option | - | Option |
| | Enabling Env't | Implementation support | - | - | - | - |
| | E-Applications | Studies & capacity building | - | - | - | - |
| **Power** | Generation | Multiple | Option | Base | - | Base |
| | Solar | Crop Drying or Generation for Grid | Base | - | - | - |
| | Transmission | CLSG WAPP | Option | Base | - | Base |
| | Distribution | Build out grid | Option | Base | Option | Base |
| | Cap Building | Sector reform & strengthening | Option | Base | - | - |
| **Water** | Irrigation | Irrigation | - | Base | - | - |
| **Area Development** | TIP | Bridge, Airport & New Freetown | Option | Option | - | Option |

Subsequently, the next (and last) baseline infrastructure project under this scenario is described, i.e. "solar" under the Sector "Power". Then, the optional infrastructure packages relevant to scenario 1 that are featured in Table 3.1 will be discussed.

However, they will be presented in order of declining priority to this particular growth scenario. For Scenario 1, this order is presented in Table 3.3 and begins, for example, with "national links" under the Sector Category "ICT". However, as this same package constitutes a baseline infrastructure package under scenario 3 "Investment Infrastructure Package for ICT Sector Growth", it will be discussed in detail under scenario 3 only. The first **baseline** infrastructure package to be discussed under scenario 2 will be "border trunk roads", as the preceding baseline packages "interior trunk roads and feeder roads" will have been discussed already under scenario 1.

It will be noted that "Area Development," which includes a bridge, airport and measures to re-develop the Freetown hub, is considered "optional" to all promising growth scenarios. This program would, in fact, hugely benefit the national business climate and help to attract greater private sector investment into the country. This makes the TIP project indirectly beneficial and relevant to three growth scenarios but directly essential to none. Nonetheless, it will be profiled sequentially within the mining sector scenario since that is the sector which is most dependent on attracting foreign direct investment. It should be noted that the GOSL considers TIP to be the most important of all infrastructure priorities in the country given its importance in improving the accessibility of Freetown which is considered a pervasive barrier to FDI.

The method of prioritizing infrastructure options thus progresses in sequence from one scenario to the next. In so doing, it enables disclosure of the domestic versus regional integration issues implied in each discrete growth scenario. It will permit key questions to be addressed, such as: "does this road project provide benefit to neighboring countries in the region or does it link to a trade corridor with greater potential than otherwise planned for?" or "does this power generation project complement regional sources of supply in a meaningful way?" It also permits development of scenario-specific action plans that are needed in addition to infrastructure to overcome limitations and binding constraints that hamper growth.

As such, each scenario will identify important areas of policy dialogue or sector reform to accompany physical infrastructure investments and will specify "soft side" studies, capacity building and other institution building measures essential to render physical infrastructure more productive and to ensure the sustainability of the investments. Each scenario also considers the role of FDI and PSP in sector development plans and attributes financing targets for the private sector that corresponds to GOSL aspirations. After holistic discussion of each growth scenario, this chapter turns to a discussion of key cross-cutting measures that will improve the prospects for successful implementation of increased investment in infrastructure. These include recommendations aimed at generating a domestic supply response to infrastructure investment opportunities as well as measured to improve the environment for embarking upon public private partnerships in infrastructure.

Whether a project is "national" or "regional" is also an important dimension of analysis and this warrants further explanation. An understanding of the term "regional" is required for this purpose and it will include two elements. From an **"integration" perspective**, a project might be funded and implemented on a solely national basis when, in fact, it will have a strong impact on extending Sierra Leone's ties with the region and integrating it into the regional ECOWAS economy.In this case, a liberal definition will be applied and the project will be categorized as **"regional" in terms of impact**.

A good example of this would be the proposed ICT investment in "missing links" that will connect Sierra Leone's terrestrial ICT backbone to Liberia and Guinea. Sierra Leone has secured development partner financing for this project on a purely national basis, though the intent and impact of the project is to enable the country to fill missing links in the ECOWAS ICT networks and join the regional communications market.

The other variant arises when a project will be or is proposed to be financed from regional resources in which case a **"financing" perspective** will also designate a project as **"regional in terms of financing source"**. In order to help readers of this report follow the detail of the subsequent narrative and also distinguish between projects which are national in impact, regional in impact and regional in terms of financing, Table 3.2 on the following pages includes a detailed and extensive fold-out of the entire portfolio of infrastructure and capacity building projects investigated for the present report. This can serve as a reference base on which to follow the subsequent narrative. In addition to presenting the regional versus national aspects of infrastructure programming, this table identifies the comprehensive allocation of projects by scenario and indicates the state of readiness of a project to move ahead. It stipulates that U = unplanned, P = Planned, NYI = prepared by not yet implemented and I = Under Implementation. Those which are "unplanned" generally correspond to suggestions that the report makes about enhanced infrastructure investments that GOSL might like to consider given the relatively greater leverage, affordability and availability of financing for regional projects.

## Table 3.2: SUMMARY COST ESTIMATE OF ALL ENVISAGED INFRASTRUCTURE PROJECTS IN ALL CATEGORIES, INCLUDING TOTALITY

| | | Million US $ | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Infrastructure Category** | **Includes** | **Total** | **R or N?** | **Status** | **Joins Regional Networks?** | **National Financing Envelope** | **Regional Financing Envelope** | |
| Status Key: U = Unplanned; P = Planned & in Pipeline; NYI = Prepared but Not Yet Implemented; I = Under Implementation | | | | | | | | |
| **Road Transport** | Feeder Roads | $25,01 | N | P/NYI/I | NO | $25,01 | $0,00 | |
| | Interior Trunk Roads Category A | $373,80 | N | P/NYI/I | NO | $373,80 | $0,00 | |
| | Interior Trunk Roads Category B | $45,28 | N | P/NYI/I | NO | $45,28 | $0,00 | |
| | Regional Southern Coastal Highway Category A | $59,01 | R | P | YES | $0,00 | $59,01 | |
| **Shading Key** | Core Road Network Maintenance | $330,40 | N | P | NO | $330,40 | $0,00 | |
| **ADB Suggestion & Estimates** | Kamakwie SL to Medina Dula Guinea Road Link* | $1,25 | R | U | YES | $1,25 | Could Qualify as regional? | |
| | Falaba SL toFaranah Guinea Border Road Link | $1,00 | R | U | YES | $1,00 | | |
| | Koindu SL to Guekedou Guinea Border Road Link | $0,50 | R | U | YES | $0,50 | | |
| | Koindu SL to Voinjama Liberia Border Road Link | $0,50 | R | U | YES | $0,50 | | |
| | Bridge across Marama River | TBD | R | U | YES | TBD | | |
| | 4 Fixed Weigh Stations @ Border Posts | $2,00 | R | U | YES | $2,00 | | |
| **Roads TOTAL** | All Road Projects, without Costs for TBDs | $838,74 | | | | $779,74 | $59,01 | |
| **Trade Facilities** | Market Centers | $12,00 | R | U | YES | $12,00 | Could qualify as regional? | |
| **ADB Suggestion & Estimates** | Common Border Facilities | $16,00 | R | U | YES | $16,00 | | |
| | Capacity Building for Regional Trade Facilitation | $6,00 | R | U | YES | $6,00 | | |
| | Incremental Recurrent Costs to GOSL | TBD | N | U | YES | TBD | | |
| **Trade TOTAL** | All Trade Related Projects, without costs for TBDs | $34,00 | | | | $34,00 | | |
| **River Transport** | River docks, wharves, dredging | TBD | N | U | NO | TBD | $0,00 | |
| **River TOTAL** | All River Transport Projects | TBD | | | | TBD | $0,00 | |
| **Energy Sector** | | | | | | | | |
| **Generation** | ABSL (Addax Bio-Energy Sierra Leone) | $45,50 | N | I | YES w/WAPP | $45,50 | $0,00 | |
| | Bumbuna II, III & IV | $748,80 | N | U/P | YES w/WAPP | $748,80 | $0,00 | |
| | Bekongor Hydro | TBD | N | U | YES w/WAPP | TBD | $0,00 | |
| | Bagbe-Bafin River Hydro | TBD | N | U | YES w/WAPP | TBD | $0,00 | |
| | Kamatimbo Hydro | TBD | N | U | YES w/WAPP | TBD | $0,00 | |
| | Solar Power for Crop Drying | $3,00 | N | U | NO | $3,00 | $0,00 | |
| | Solar Power for Supply into Grid-- Rural Elec. | Incl in Rural Dist | N | U | NO | Incl in Rural Dist | $0,00 | |
| **Transmission** | Establish WAPP CLSG Transmission (Total Cost) | $479,52 | R | NYI | YES | - | $479,52 | |
| **Distribution** | Build Rural Distribution off WAPP | $140,00 | N | U | NO | $140,00 | $0,00 | |
| **Sector Mgm't & Cap. Building** | Sector Unbundling and reform | $15,00 | N | P | NO | $15,00 | $0,00 | |
| | Rural Electrification Plan | $15,00 | N | P | NO | $15,00 | $0,00 | |
| | Establish & strengthen sector regulators | $5,00 | N | U | NO | $5,00 | $0,00 | |
| | Establish and strengthen RE Agency | $5,00 | N | U | NO | $5,00 | $0,00 | |
| **Energy TOTAL** | All Energy Sector Projects | $1 456,82 | | | | $977,30 | $479,52 | |
| **ICT** | | | | | | | | |
| **Int'l Conn.** | Connection to ACE Broadband fiber optic cable | $25,00 | R | I | YES | - | $25,00 | |
| **National Connectivity** | Estab. GOSL VPN Freetown, Nat'l IXP, Nat'l Emergency Comms Network | $1,70 | N | I | NO | $1,70 | - | |
| | Metropolitan Wide Area Network fibre-optic | $29,00 | N | NYI | NO | $29,00 | - | |
| | Operations & Maintenance | $1,00 | N | NYI | NO | $1,00 | - | |
| | Establish last mile WiMAX Access Links | $1,61 | N | NYI | NO | $1,61 | $0,00 | |
| | Deploy Terrestrial Backbone: Design & Installation of 610 km. fibre optic cable across SL and connecting across borders to Guinea and Liberia; enable participation in ECOWAN | $15,25 | R | NYI | YES | $15,25 | $0,00 | |
| | Extend backbone phase 2. Install + 246 km. cable along terrestrial interior ring including drop & insert points | $15,00 | N | NYI | NO | $15,00 | $0,00 | |
| | Extend backbone phase 3 along 15 spokes to reach mining sites, district HQs, tourism & Education sites | $12,80 | N | P | NO | $12,80 | $0,00 | |
| **Enabling Env't for Connectivity** | Commercialize SierraTel, Liberalize int'l gateway, PPP for SALCAB SPV Landing Station; Divestiture of part of SALCAB for PSP | $2,90 | R | I | YES | $0,00 | $2,90 | |
| | Project Implementation | $1,30 | R | I | YES | $0,00 | $1,30 | |
| **Enabling Env't for E-Applications** | Technical, market studies & business plans | $0,35 | R | NYI | YES | $0,35 | $0,00 | |
| | Project Implementation & Capacity Building | $1,30 | N | NYI | YES | $1,30 | - | |
| **ICT Total** | All ICT Projects | $107,21 | | | | $78,01 | $29,20 | |
| **Water** | Irrigation | $18,00 | N | U | NO | $18,00 | TBD | |
| **Water TOTAL** | | $18,00 | | | | $18,00 | TBD | |
| **Area Dev't** | Lungi-Freetown bridge & Related | TBD | N | U | NO | TBD | TBD | |
| **Port** | Upgrade of bulk mineral terminal @ QE or other Port | TBD | R | U | NO | TBD | TBD | |
| **Rail Transport** | ECOWAS Rail Corridor Connections | TBD | R | U | YES | TBD | TBD | |
| | **GRAND TOTALS** | **$2,455 + TBD** | | | | **$1,887 + TBD** | **$568 + TBD** | |

## OF KNOWN GOSL PROJECTS + AFDB RECOMMENDATIONS FOR 2011-2030 TIME FRAME

| | Financing Secured | | | Funding Gap | Attribution of Infrastructure Investment Packages to Scenarios | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Cash Crop Global Trade | | Food Crop Regional Trade | | ICT | | Mining | |
| | Public Sector | Dev't Partner | Private | Total | Base Case | Option | Base Case | Option | Base Case | Option | Base Case | Option |
| | $1,18 | $16,79 | $0,00 | $7,04 | $25,01 | - | $25,01 | - | - | - | - | - |
| | $0,00 | $121,14 | $0,00 | $252,66 | $373,80 | - | $373,80 | - | - | - | $373,80 | - |
| | $0,00 | $0,91 | $0,00 | $44,37 | $45,28 | - | $45,28 | - | - | - | $45,28 | - |
| | $0,00 | $0,00 | $0,00 | $59,01 | $59,01 | - | $59,01 | - | - | - | $59,01 | - |
| | $330,40 | $0,00 | $0,00 | $0,00 | $330,40 | - | $330,40 | - | - | - | $330,40 | - |
| | $0,00 | $0,00 | $0,00 | $1,25 | | - | $1,25 | - | - | - | $1,25 | - |
| | $0,00 | $0,00 | $0,00 | $1,00 | - | - | $1,00 | - | - | - | $1,00 | - |
| | $0,00 | $0,00 | $0,00 | $0,50 | - | - | $0,50 | - | - | - | $0,50 | - |
| | $0,00 | $0,00 | $0,00 | $0,50 | - | - | $0,50 | - | - | - | $0,50 | - |
| | $0,00 | $0,00 | $0,00 | $0,00 | - | - | TBD | - | - | - | | - |
| | $0,00 | $0,00 | $0,00 | $2,00 | - | - | $2,00 | - | - | - | $2,00 | - |
| | $331,58 | $138,84 | $0,00 | $368,33 | $833,49 | $0,00 | $838.74 + TBD | $0,00 | $0,00 | $0,00 | $813,74 | $0,00 |
| | $0,00 | $0,00 | $0,00 | $12,00 | - | - | $12,00 | - | - | - | $12,00 | - |
| | $0,00 | $0,00 | $0,00 | $16,00 | - | - | $16,00 | - | - | - | $16,00 | - |
| | $0,00 | $0,00 | $0,00 | $6,00 | - | - | $6,00 | - | - | - | $6,00 | - |
| | $0,00 | $0,00 | $0,00 | TBD | - | - | | - | - | - | | - |
| | $0,00 | $0,00 | $0,00 | $34.00 + TBD | | | $34,00 | $0,00 | $0,00 | $0,00 | $34,00 | $0,00 |
| | $0,00 | $0,00 | $0,00 | TBD | - | To Include | To Include | - | - | - | | |
| | $0,00 | $0,00 | $0,00 | TBD | $0,00 | $0,00 | $0,00 | $0,00 | $0,00 | $0,00 | $0,00 | $0,00 |
| | | | | | - | - | | | | | | - |
| | $0,00 | $0,00 | $45,50 | $0,00 | - | $45,50 | $45,50 | - | - | - | $45,50 | - |
| | $0,00 | $0,00 | $0,00 | $748,80 | - | - | - | - | - | - | Include | - |
| | $0,00 | $0,00 | $0,00 | TBD | - | - | - | - | - | - | Include | - |
| | $0,00 | $0,00 | $0,00 | TBD | - | - | - | - | - | - | Include | - |
| | $0,00 | $0,00 | $0,00 | TBD | - | - | - | - | - | - | Include | - |
| | $0,00 | $0,00 | $0,00 | $3,00 | $3,00 | - | - | - | - | - | - | - |
| | $0,00 | $0,00 | $0,00 | TBD | - | - | - | - | - | - | - | - |
| | $0,00 | $479,52 | $0,00 | $0,00 | - | $479,52 | $479,52 | - | - | - | $479,52 | - |
| | $0,00 | $0,00 | $0,00 | $140,00 | - | $140,00 | $140,00 | - | - | $140,00 | $140,00 | - |
| | $0,00 | $0,00 | $0,00 | $15,00 | - | $15,00 | $15,00 | - | - | - | $15,00 | - |
| | $0,00 | $0,00 | $0,00 | $15,00 | - | $15,00 | $15,00 | - | - | - | $15,00 | - |
| | $0,00 | $0,00 | $0,00 | $5,00 | - | $5,00 | $5,00 | - | - | - | $5,00 | - |
| | $0,00 | $0,00 | $0,00 | $5,00 | - | $5,00 | $5,00 | - | - | - | $5,00 | - |
| | $0,00 | $479,52 | $45,50 | $931.80 + TBD | $3,00 | $705,02 | $705,02 | $0,00 | $0,00 | $140,00 | $705.02 + TBD | $0,00 |
| | | | | | | | | | | | | |
| | $0,00 | $25,00 | $0,00 | $0,00 | | | | | $25,00 | | | |
| | $0,00 | $1,70 | $0,00 | $0,00 | | | | | $1,70 | | | |
| | $0,00 | $29,00 | $0,00 | $0,00 | | | | | $29,00 | | | |
| | $0,00 | $1,00 | $0,00 | $0,00 | | | | | $1,00 | | | |
| | $0,00 | $1,61 | $0,00 | $0,00 | - | - | - | - | $1,61 | - | - | - |
| | $0,00 | $15,25 | $0,00 | $0,00 | - | - | - | - | $15,25 | - | - | - |
| | $0,00 | $15,00 | $0,00 | $0,00 | - | - | - | - | $15,00 | - | - | - |
| | $0,00 | $0,00 | $0,00 | $12,80 | - | $12,80 | - | $12,80 | $12,80 | - | - | $12,80 |
| | $0,00 | $2,90 | $0,00 | $0,00 | - | - | - | - | $2,90 | - | - | - |
| | $0,00 | $1,30 | $0,00 | $0,00 | - | - | - | - | $1,30 | - | - | - |
| | $0,00 | $0,35 | $0,00 | $0,00 | - | - | - | - | $0,35 | - | - | - |
| | $0,00 | $1,30 | $0,00 | $0,00 | - | - | - | - | $1,30 | - | - | - |
| | $0,00 | $94,41 | $0,00 | $12,80 | $0,00 | $12,80 | $0,00 | $12,80 | $107,21 | $0,00 | $0,00 | $12,80 |
| | $0,00 | $0,00 | $0,00 | $18,00 | - | - | $18,00 | | - | - | | |
| | $0,00 | $0,00 | $0,00 | $18,00 | - | - | $18,00 | $0,00 | - | - | $0,00 | $0,00 |
| | TBD | TBD | TBD | TBD | - | - | Include | - | - | - | Include | |
| | TBD | TBD | TBD | TBD | - | - | - | - | - | - | Include | |
| | TBD | TBD | TBD | TBD | - | - | | Include | - | - | Include | |
| | $332 | $713 | $46 | $1,365 + TBD | $836 | $718 | $1,596 + TBD | $13 +TBD | $107 | $140 | $1,553 + TBD | $13 |

# 1. Scenario 1 - Investment package for stimulus of global trade in cash crops

This scenario aims to release growth from agricultural crop production geared specifically towards global exports. To date, such export commodities travel in bulk overseas by ship. Given this trade orientation and Sierra Leone's coastal position, the sector relies upon a domestic transport system designed principally to "supply and evacuate" the interior, moving goods towards seaports and coastal points of exit.

As such, the road infrastructure required for this growth scenario is intrinsically domestic in orientation. Though the nation's core road network naturally facilitates both directions of inland travel, it is not primarily concerned with connecting key production centers to those of neighboring countries; it is rather oriented towards providing access to interior production zones through feeder roads and providing connections between interior towns and the capital. This is the principal distinction between scenarios one and two whereby the latter is focused on trunk road connections to border posts to link to roads in neighboring countries.

The other main distinction between the agricultural scenarios relates to the energy requirement of each. Solar crop dryers can meet the energy requirements to support quality upgrades in cash crops for global trade but this would not be adequate for the food crop sector. Because agro-industry is based upon transformation of food crops through processing and is associated with regional trade, investments in grid-based electrical power supply are reserved for discussion under Scenario 2 where crop production is stimulated by regional trade.

Scenario 1 has a base case requirement for investment in core trunk and feeder roads that connect the interior plus investment in solar-enabled crop drying systems to improve post-harvest quality of production. While crop production oriented towards global exports would also benefit from investment in rail and river transport, grid-based electrical power, ICT and an improved investment climate enabled through the Freetown hub area development project, all of these are relatively more optional as compared to roads and solar power. The IIP prescription for Scenario 1 is therefore summarized in Table 3.3 below.

### Table 3.3: Infrastructure Investment Package Recommended for Cash Crops Traded Globally

| Sector | Project Category | Importance |
|---|---|---|
| **Road Transport** | Interior Trunk Roads w/maintenance | Base |
| | Feeder Roads | Base |
| **Power** | Solar Energy for Crop Drying | Base |
| **ICT** | National Links | Option |
| **River Transport** | River docks, Wharves & Dredging | Option |
| **Rail Transport** | ECOWAS Rail Corridor | Option |
| **Area Development** | TIP: Bridge, Airport & New Freetown | Option |
| | Generation | Option |
| **Power** | Transmission | Option |
| | Distribution Grid | Option |
| | Sector Reform & Cap Building | Option |

### Figure 3.1: Network Sectors and Core Road Segment Investment Plans of SLRA

# 2. Sierra Leone's National Investment Plans for Interior Roads

In 2008, the Sierra Leone Roads Authority looked forward in time and developed a comprehensive vision and twenty-year investment plan to provide a safe, reliable and sustainable National Roads System (NRS) to advance the socio-economic development needs of the country. The plan divides the country into five network planning sectors as is depicted in Figure 3.1 below and addresses a need to provide all-weather access to most productive areas of the country. In so doing the plan aims to redress the lack of access to food and cash crop production zones through trunk and feeder road investments, recognizing that deficiencies in the current road network present an economic opportunity loss to the country when exports are channeled abroad via neighboring states. It also sets a priority on ensuring the security of the rural population and enabling the delivery of social services into that milieu.

The plan thus reaffirms that the stock of public roads totals about 11,500 km, of which 8,555 km are classified as being in the "National Road System" and the balance are unclassified local roads and tracks. Rather than focus upon the construction of new roads which would alter the density of the national road network, the intention of the SLRA is to rehabilitate, repair, resurface and otherwise restore the utility of the entire NRS. It is notable that, except for the Southern Coastal Highway (including the Zimmi-MRU Bridge leg designated as 'A-15' on Figure 3.2 and A-3 link to Guinea past Kambia), none of the other roads that carry traffic to borders with Guinea or Liberia are planned for high-volume traffic of Category A standard. This is not problematic for the growth scenario pertaining to global trade in agricultural crops because that cargo is inwardly destined to the port for export by ship to overseas destinations. It is, however, a potential constraint to the regional trade growth scenario and remedies are therefore proposed within that sector's IIP.

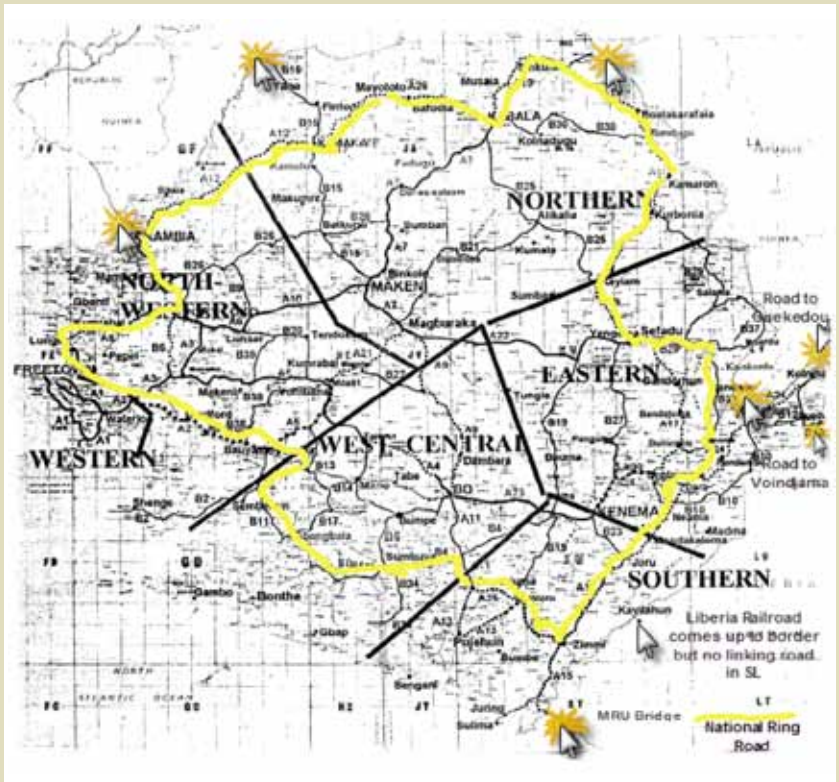
## BASE IIP FOR INTERIOR TRUNK ROADS AND FEEDER ROADS TO ENABLE CASH CROP EXPORTS

The whole of the SLRA road transport sector investment plan is included in the base case IIP for this scenario because both feeder and interior road upgrades are deemed to be relevant to and essential for enabling greater productivity from the cash crops sector.

### RATIONALE, OBJECTIVES AND BENCHMARKS FOR INTERIOR TRUNK ROAD AND FEEDER ROAD INVESTMENT

Investment in interior trunk roads and feeder roads is recommended in order to overcome the binding constraint of isolation which keeps the agrarian population engaged in the subsistence economy. Roads are needed to provide access to producing areas and enable traders to reach cash crop producing areas in dry and rainy seasons so as to purchase produce. Figure 3.2 identifies that the SLRA investment plan includes upgrades and repairs to Category B and A roads. Although feeder roads are not identified on the map, their rehabilitation is also included in the investment spending plans. A related and embedded objective within this investment plan is to join up segments in the core road network in order to produce a national circumference road that rings the country. This is depicted visually in Figure 3.2 which follows. This 1123 km ring road will bring current A and B road segments up to Category A standard and will serve a critical national unity objective, providing GoSL the ability to reach areas of unrest, ensure national security and deliver services into the interior. Category A roads are those designed to form a network of main trunk roads serving high traffic corridors and enabling relatively long-distance trips between destinations. These roads connect Freetown with regional and district centers and, along the Southern Coastal Highway, they will eventually link to trunk roads in neighboring Guinea and Liberia. Category B roads are secondary roads

**Figure 3.2: Planned Circumference Road within Interior Borders of Sierra Leone**



connecting key economic centers and they serve district centers, high density population areas, agricultural trading centers and tourist sites, enabling medium volume traffic flow on medium to long distance trips.

SLRA has been assigned responsibility for 4300 km in the core road network that includes both Category A and B roads, while local and district councils have been delegated responsibility for the stock of 4255 km of feeder roads. Category F comprises feeder roads serving a primary collection and distribution function in rural production zones and they provide access to Chiefdom centers, the lowest administrative authority of government. All of these roads are vital to the recovery of Sierra Leone's agricultural sector and a revitalized road network will help with poverty reduction by increasing access to production zones and contributing to the conversion of subsistence farming into commercial farming as a specialized business. The road network is essential to remove rural areas from their current degree of isolation and enable farmers to gain information and begin responding better to market signals.

## SPECIFIC INTERIOR TRUNK ROAD AND FEEDER ROAD INVESTMENT PROJECTS

Table 3.4 summarizes the set of road investments warranted for the base case growth potential of the cash crops sector. This reveals that in addition to 1555 km of road work which has yet to be completed under the current phase of road works[1], an additional 6788 road kilometers require a variety of types of reconstruction work to restore the NRS to full functionality by 2029. This will require a total estimated investment of $503.1 million evaluated in 2008 constant dollars. The type of work required varies across a range of interventions from spot re-graveling, to resealing or refurbishment and in some cases to an upgraded Double Bitumen Surface Treatment paved road standard.

## IMPLEMENTATION ARRANGEMENTS AND TIMELINE

Table 3.5 below presents the timeline for the roads program implementation.

### Table 3.4: Cost Estimate for Specific Interior Trunk Road and Feeder Road Projects

| National Road System Segments to Connect Interior | | | Type of Work | Km in | Km per | Km of | Est'd Cost |
|---|---|---|---|---|---|---|---|
| Category | Sector | Segment | | Network | last phase | Works | USD Millions |
| A | Eastern | 5 Segments | All types | | | 430 | 118 |
| A | Northern | 7 Segments | All types | | | 546 | 32,807 |
| A | N-Western | 11 Segments | All types | | | 525 | 103,89 |
| A | W-Central | 2 Segments | Rehab & regravel | | | 191 | 86,422 |
| A | Southern | 5 Segments | All types | | | 254 | 91,688 |
| A | Southern | Bo-Sejeh Br.-Kenema | Overlay paved road | | | 65 | 3,64 |
| A | Southern | Bo-Bandamuma | Spot Regravel | | | 56 | 2,24 |
| A | Southern | Bandajun-Pujehun-Potoru | Rehab previously paved | | | 48 | 1,728 |
| A | Southern | Daru-Joru-Gorahun-Zimmi | Upgrade to BP | | | 85 | 25,075 |
| A | Southern | Bandajumma-Zimmi-MRU Br. | Reconstruction Gravel | | | 73 | 59,005 |
| **A** | | **29 Road Segments** | **TOTAL:** | **2312** | **366** | **1946** | **432,807** |
| B | Eastern | 7 Segments | Spot Regravel | | | 424 | 4,24 |
| B | Northern | 6 Segments | Spot Regravel & Rehab | | | 423 | 7,404 |
| B | N-Western | 9 Segments | Spot Regravel & Rehab | | | 366 | 6,112 |
| B | W-Central | 8 Segments | Spot Regravel & Rehab | | | 332 | 6,412 |
| B | Southern | 6 Segments | Spot Regral & Upgrade BP | | | 374 | 21,115 |
| **B** | | **36 Road Segments** | | **2091** | **172** | **1919** | **45,283** |
| B | Eastern | Kono & Kailahun Districts | Spot Regravel | | | 426 | 4,266 |
| B | Northern | Koinadugu & Bombali Districts | Spot Regravel | | | 651 | 6,514 |
| B | N-Western | Kambia, Port Loko & Tonkolili | Spot Regravel | | | 716 | 7,166 |
| B | W-Central | Bo, Moyamba & Bonthe Dist. | Spot Regravel & Maint | | | 613 | 1,89 |
| B | Southern | Pujehun & Kenema Districts | Spot Regravel | | | 517 | 5,173 |
| **B** | | **2923 Km of Feeder Roads** | | **4152** | **1229** | **2923** | **25,009** |
| **ALL** | | **GRAND TOTAL of Categories A + B + Feeder Roads:** | | **8555** | **1767** | **6788** | **503,099** |

«All Types» of Road work includes: Rehab of previously paved, reconstruction, resealing, spot regraveling, upgrades to BP
Source: SLRA Strategy and Investment Plan, 2009 - 2012

1 The current stock of road projects on-going is presented in Table 1.25 in Chapter One.

## Box 3.1: The Road from Kenema to Kailahun

Source: Wikimedia.org

This reflects that SLRA has set 2014 as the target date by which minimum service access levels in the interior will be achieved through rehabilitation of the feeder road network. The discussion on fragility in chapter one validates the wisdom of this objective. Not only do feeder roads help connect rural populations to markets and serve to reduce poverty, they help to address the perception that the interior is ignored by Freetown and thus mitigate the risk of renewed civil unrest.

The plans call for Category A and B roads to be added at the rate of 120 km per year and the ring road will have been completed at the latest by 2029 as all 4403 km in the core road network (CRN) will by then have been brought up to maintainable standard. SLRA's plan also states that a road asset management system is under preparation to establish standards and enable future upkeep. In this context, a long term maintenance plan has been evaluated and it is estimated that the cost (in constant 2004 USD) of maintaining the CRN stock will reach $19.6 million on an annual basis by 2029. Funds for maintenance are to be provided to SLRA from the National Roads Fund maintained by SLRTA for this purpose. The benchmarks and targets under the National Maintenance Program identify that Sierra Leone considers it essential to sustain the investment still to be made in restoring the CRN and "steady state" will not be reached until 2030. No defined financing mechanism has yet been established for the feeder road network devolved to local authorities so discussion of this issue is resumed in Accompanying Measures.

Table 3.5 also reflects the fact that Sierra Leone aims to monitor reductions in average vehicle operating costs and reductions in average travel time between key centers as indicators of improved performance of the roads sector. Baseline and target benchmarks of this type fall under the purview of SLRTA; they are not yet available but will be forthcoming.

It is clear that Sierra Leone faces substantial investment requirements in the roads sector for the coming two decades. To date the country has enjoyed substantial support from development partners to improve sector performance and, in that process, several complementary reform measures have been identified by stakeholders to identify sector management improvements that will yield value for money, will protect and maintain investments and will enhance the development of local capacity, in both the public and private

### Table 3.5: Implementation Plan for Specific Interior Trunk Road and Feeder Road Investment Projects

| Activities and Targets for Road Infrastructure | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Activity** | **2005** | **2010** | **2012** | **2014** | **2020** | **2025** | **2029** | **2030** |
| **Rehabilitation of Core Road Network (KM)** | Baseline | | | | | | | |
| Rehabilitate cumulative Cat A & B Road Length: | 1500 | 2100 | 2340 | 2580 | 3300 | 3900 | 4403 | 4403 |
| Circular ring road around country established by: | | | | | | | 1123 | |
| **Rehab of Feeder Road Network (Km)** | | | | | | | | |
| Rehabilitate Increments of Feeder Roads Network: | 24 | 1229 | +2923 | | | | | |
| Achieve minimum rural service access levels: | | | | 4152 | | | | |
| Reduction in average vehicle operating costs | | | | | | | | |
| Reduction in average travel time between key ctrs | | | | | | | | |
| Devolve feeder roads towns & district councils | | | | | | | | |
| **Implement National Maintenance Program (Km)** | | | | | | | | |
| Maintainable Cat A + B Network Baseline: | 1500 | | | | | | | |
| Increments Added to Maintainable Base: | | 600 | 240 | 250 | 720 | 720 | 720 | Steady state |
| Cumulative Stock of Maintainable Base A+B: | | 2100 | 2340 | 2580 | 3300 | 3900 | 4403 | 4403 |
| **TOTAL NETWORK** | **1500** | **3329** | | **6732** | **7452** | **8052** | **8555** | **8555** |

sectors. These recommendations are being taken on board and contribute to Sierra Leone's on-going action plan in the roads sector as detailed in the discussion of Accompanying Measures in Section 3.6.1 of this chapter.

## BASE IIP FOR SOLAR ENERGY FOR CROP DRYING TO ENABLE CASH CROP EXPORTS

Chapter two identified (Table 2.7) that mold is a problem which plagues Sierra Leone's cocoa crop and the same observation applies to the coffee harvest. Consequently, the prices fetched by Sierra Leone for its cocoa and coffee cash crops are estimated to be 10 to 20 percent lower (Table 2.8) than prices achieved by other ECOWAS countries with better quality management systems. The Sierra Leone Institute of Engineers has determined that solar energy can be harnessed to enable the drying of export crops after harvest and has identified a type of solar drying equipment that is deemed to be the most suitable technology for this purpose. More affordable than rural electrification through expansion of the national grid, solar driers can be widely dispersed to rural production sites and independently operated based on local weather conditions.

This will enable farmers to apply preliminary post-harvest treatment to their crops to lower the moisture content to recommended levels, thereby preventing mold and related problems and preserving product quality and the potential to gain higher returns. Dissemination and adoption of solar crop drying practices is an essential component of an overall initiative to upgrade agricultural crop product quality. As such, GoSL intends to achieve a 5 percent penetration rate in use of solar driers for crop drying by 2025. To encourage the adoption and maintenance of solar technology by rural communities, GOSL has partnered with Barefoot College of India to train rural women in the installation, repair and maintenance of social devices which can improve productivity at household level. Although this is considered base case investment which would yield greater returns to Sierra Leone both at the farm gate in terms of farmers' incomes and for the treasury in terms of foreign exchange gains from exports, there is no specifically quantified investment plan for solar energy other than a generic target seeking $3 million to provide gap funding for solar expansion in the rural milieu. The implementation of the Barefoot College project is already underway.

## OPTIONAL IIP TO ENABLE CASH CROP EXPORTS

### PACKAGE DESCRIPTION, RELEVANCE, PRIORITIES AND COST ESTIMATES

Table 3.1 identifies that globally trade cash crops would benefit from optional infrastructure investments in grid based power, river transport, rail transport, ICT and Area Development of the Freetown hub. The portfolio description of planned investments in each of these infrastructure sectors is presented in subsequent base case IIPs for other growth scenarios, but this section briefly describes the type of infrastructure envisaged and identifies how each type of infrastructure would contribute to the competitiveness of cash crop production and export trade. These optional elements are presented in declining order of priority, with that listed first considered to offer the greatest value added to output and value in the cash crop sector. GOSL may have a different view of priorities, especially as concerns the Tri-Partite Accessibility project for Freetown as the constraint to FDI and the currently inadequate air and bridge links connecting Sierra Leone to countries near and far are considered paramount.

- **ICT:** Better internet and mobile communications systems would support better dissemination of news about global market conditions for export crops into rural market centers. Information of interest to cash crop producers includes information on prices and premiums for quality grades and certifications for organic, fair trade or traceability. Availability of such information to a wider degree would help to connect producers more closely into markets, would help in the transmission of incentives for quality and efficiency along value chains and would support farmers in securing competition for the purchase of their crops. It is not expected that ICT investment will extend internet access down to the farm gate in the near term, however, it can be expected over time to reach market centers and farming support centers and thereby provide a greater public service to Sierra Leone's primary cash crop producers. The cost included for the "option" package of ICT investment is that pertaining to phase 3 expansion of the terrestrial fiber optic distribution network.

- **River Transport:** Sierra Leone has a 600 km network of navigable rivers which could serve to provide a lower cost form of transport than roads. This IIP-0 would invest in docks, dredging and landing craft to develop that alternative transport system. This is considered an essential investment for the food crops sector since river transport is needed to gain access to rice producing areas. Though access to tree cash crop producing areas is not as dependent on river transport, this sub-sector would nonetheless benefit from a cheaper means of moving cargo from producing areas to coastal seaport areas and is thus considered optionally relevant to cash crops sector.

- **Rail Transport:** Rail transport, if reinstated in Sierra Leone, would be designed to carry freight from the hinterland to the port of Freetown. The line would need to resurrect the original line which reached from Freetown to the Pendembu in the heart of the Eastern province with proximity to the major cocoa and coffee producing areas. Rail freight would offer a cost competitive alternative to road freight but the cost differences cannot be estimated given that no specific rail investment package has yet been identified. It should be indicated, however, that export crop output could not, by itself, justify the cost of investment in rail infrastructure since the annual tonnages exported are under 100,000 MT per year and are thus quite low.

- **Tri-Partite Investment in Accessibility of Freetown:** At present there are poor connections between Lungi International Airport and Sierra Leone's principal business center, current Freetown, and travelers must endure a difficult leg of post-airplane transit by helicopter or ferry to arrive at their destination. Government considers this lack of accessibility as an important deterrent to investors and a hassle factor that makes Sierra Leone a less attractive investment destination relative to other locations in the sub-region. Improving the investment climate is a major policy objective to deliver on GoSL's objective of encouraging private sector led growth. This is specifically applicable in the global export crops sub-sector insofar as there is a desire to attract private investment in large scale tree crop plantations oriented towards global export.

- **Grid-based Power Supply:** With a reliable power supply, and assuming that cocoa and coffee production will increase, Sierra Leone would have the potential to add greater value to their globally-oriented agricultural exports in the future by undertaking preliminary processing in the country. This could include the roasting of coffee beans and the transformation of beans into cocoa powder as is done in neighboring Liberia. Neither of these value-addition procedures can be envisaged at the present time in Sierra Leone but if another growth sector were to justify extension of power into export crop producing areas, it would enable greater diversification in the cash crops sector.

### CONSOLIDATED COST, FINANCING PLAN AND FUNDING GAP FOR GLOBAL TRADE IIP

**Table 3.6: Global Trade IIP Base and Option Cost Estimate and Financing Plan**

| Sector | Project Category | Impor-tance | Est'd Total | Financing Targets | | | Financing Secured | | | GAP All |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Public | Dev't Partner | Private | Public | Dev't Partner | Private | |
| **Road Transport** | Interior Trunk Roads w/maintenance | Base | $808,49 | $330,40 | $478,09 | $0,00 | $330,40 | $122,06 | $0,00 | $356,04 |
| | Feeder Roads | Base | $25,01 | $8,21 | $16,79 | $0,00 | $1,18 | $16,79 | $0,00 | $7,04 |
| **Power** | Solar Energy for Crop Drying | Base | $3,00 | $0,00 | $1,50 | $1,50 | $0,00 | $0,00 | $0,00 | $3,00 |
| | | **BASE TOTAL** | $836,49 | $331,58 | $496,38 | $1,50 | $331,58 | $138,84 | $0,00 | $366,08 |
| **ICT** | National Links | Option | $12,80 | $0,00 | $0,00 | $12,80 | $0,00 | $0,00 | $0,00 | $12,80 |
| **River Transport** | River docks, Wharves & Dredging | Option | N/A | | | | | | | |
| **Rail Transport** | ECOWAS Rail Corridor | Option | N/A | | | | | | | |
| **Area Development** | TIP: Bridge, Airport & New Freetown | Option | N/A | | | | | | | |
| | Generation | Option | $45,50 | $0,00 | $0,00 | $45,50 | $0,00 | $0,00 | $45,50 | $0,00 |
| **Power** | Transmission | Option | $479,50 | $0,00 | $479,50 | $0,00 | $0,00 | $479,50 | $0,00 | $0,00 |
| | Distribution Grid | Option | $140,00 | $0,00 | $140,00 | $0,00 | $0,00 | $0,00 | $0,00 | $140,00 |
| | Sector Reform & Cap Building | Option | $40,00 | $0,00 | $40,00 | $0,00 | $0,00 | $0,00 | $0,00 | $40,00 |
| | | **OPTION TOTAL** | **$717,80** | **$0,00** | **$659,50** | **$61,80** | **$0,00** | **$479,50** | **$49,00** | **$192,80** |
| **Total Cost Estimate, Financing Plan and Funding Gap:** | | | **$1 554,29** | **$338,62** | **$1 155,88** | **$59,80** | **$331,58** | **$618,34** | **$45,50** | **$558,88** |

# 3. Scenario 2 - Infrastructure investment package for stimulus of regional trade

In contrast to scenario 1, this IIP aims to release growth from the food crops sector at large by enabling it to respond to the stimulus of domestic and regional trade. This would be achieved if infrastructure investment were to enhance the conditions for primary crop production as well as the trading conditions for primary food commodities and processed agricultural goods. As such, this growth segment encompasses the majority of primary crop sub-sector within the agricultural economy and includes related agro-industry. Road transport infrastructure is just as vital to domestic and inter-regional trade in food crops as it is to cash crops, but more is required. Scenario 2 therefore requires added investment in the quality of roads with greater consideration given to road links across borders. Since the base case investment package in road infrastructure has been presented in Scenario 1, incremental investments in Border Trunk Roads are emphasized as base infrastructure in bold below. These will be described for the first time and thus in greater detail. Road infrastructure must be complemented by investment in infrastructure that supports the

formalization of regional trade, including the establishment of common border posts, weigh stations to enable monitoring of truck cargo loads plus market centers which can serve farmers, truckers and traders alike. River transport would also be a valuable base case type of infrastructure investment along with irrigation systems to enable higher productivity in rice production. On the energy front, more substantial infrastructure is required for electricity generation and distribution to improve the conditions for agro-industry. Optional investment packages include rural processing and water pumping equipment powered by solar energy, ICT, rail and area development of Freetown hub, the whole of which is assembled in Table 3.7 below.

**Table 3.7: IIP Recommended for Regional Trade in Food Crops**

| Sector | Project Category | Food Crop Regional Trade |
|---|---|---|
| **Road Transport** | Interior Trunk Roads w/maintenance | Base |
| | Feeder Roads | Base |
| | Border Trunk Roads | Base |
| **Trade** | Cross-Border Trade Infrastructure | Base |
| **River Transport** | River docks, Wharves & Dredging | Base |
| **Power** | Generation, Multiple | Base |
| | CLSG WAPP | Base |
| | Distribution; build out grid | Base |
| | Sector Reform & Capacity Building | Base |
| **Water** | Irrigation | Base |
| **ICT** | Inter-Regional | Option |
| **Area Development** | Freetown Hub | Option |
| **Rail Transport** | Inter-Regional | Option |

## BASE IIP FOR ROADS THAT ENABLE REGIONAL TRADE

Chapter Two identified that Sierra Leone's stance towards inter-regional trade is ambivalent and Government tends to flip-flop between measures that tolerate it or, periodically, thwart it. This results from the fact that trade across regional borders is mostly informal and often involves criminal or illegal activity which could destabilize the nation. GOSL is therefore keen to facilitate an improvement in the nation's trading capacity and seeks to shift cross border trade from informal patterns to formally sanctioned modes of exchange. This will be substantially aided by an upgrade in the roads which connect to manned border posts and link to equivalent road corridors in the neighboring country. The Western and Eastern links of the Southern Coastal highway connecting Sierra Leone to Guinea and Liberia were provided for in the Base case road package presented in Scenario 1. These road investments, together with all of the other base case roads projects including ring road and feeder roads included in the cash crop growth scenario are equally relevant and vital to the food crop/ regional trade growth scenario. They are included in the cost estimates for this scenario.

The Sierra Leone – Guinea link recently inaugurated to commence construction represents a 76 km road segment that epitomizes a type of regional infrastructure package that is relevant to facilitating regional trade. Commencing at Kambia in Sierra Leone, and running nine km into Guinea, this project will erect a common border post facility at Gbalamoya including permanent weighing stations to cater to axle weight control measures on cargo bound by truck along the highway. The project represents the first and only such "common border facility" presently designed to serve Sierra Leone. Therefore, Scenario Two seeks to replicate this type of investment to enhance the conditions for cross-border trade on the Eastern border and across up-country borders deep in the interior.

## OBJECTIVES AND BENCHMARKS FOR IIP-B IN ROADS TO SUPPORT REGIONAL TRADE

Sierra Leone's national road network was presented in Figures 3.1 and 3.2 in the prior scenario, but this did not provide a perspective on how the nation's roads connect to those in the neighboring countries. What they do show, however, is that many of the key arteries that connect the planned ring road to border locations are planned as Category B roads. A good example would be the B-15 segment connecting Kamakwie in the North to Madina Dula in Guinea. Figure 3.3 which follows presents a sub-regional road map together with reference markers for border locations identified with red, purple and yellow arrows.

The red arrows in Figure 3.3 depicts the border crossings associated with the Southern Coastal Highway which have been designated under the SLRA Investment Plan as Category A road arteries. All other roads outside the periphery of the national ring road were originally designated by SLRA as Category B arteries due to the relatively low traffic volumes previously observed on these axes and these are depicted on the map by purple arrows. However, GOSL recognizes that there is a difference between structural planning based upon past traffic patterns and proactive planning that anticipates a change in the volume of trade. As a consequence, GOSL favors a plan to upgrade key up-country links across the border and an incremental cost will be incurred in bringing these from Category B to Category A standard. Table 3.8 puts forward a proxy incremental cost, estimated at +$300,000 per kilometer, required to upgrade these border segments to Category A standard.

The presence of yellow arrows on this diagram identifies locations where there are not obvious links between the national road systems of neighboring countries and it remains

**Figure 3.3: Sub-Regional Roads Network Connecting Sierra Leone, Guinea and Liberia**


to be clarified whether road links and border infrastructure at these locations should be provided for or enhanced. Other such disconnects might exist beyond the illustrative examples identified here.

The postulated plan in Table 46 also asserts the need to add at least eight fixed weigh-bridge installations. ECOWAS regulations recommend installation of fixed weigh bridges at border posts, at platforms generating high traffic volume and at judicious locations. The accompanying text box identifies how consultants reached the conclusion that Sierra Leone requires at least eight fixed weigh-bridge installations to align with the intent of ECOWAS provisions on axle-load control.[2]

The key question posed under Scenario Two is essentially this: "Are Category B roads planned for connecting the ring road to border locations adequate for the next twenty years?" Will they be sufficient to integrate Sierra Leone more effectively with the larger region—not just MRU members, but also the ECOWAS states beyond? Will they cater to regional agricultural trade flows likely to increase under the continent-wide CAADP program? Will they cater to the country's development objectives of attracting private investment into agro-industry that serves a regional market with products? Does this vision take into account the potential road demand presented by a mineral corridor development plan? The assertion here is that the initial SLRA road investment plan did not anticipate dynamic change in traffic due to a resumption of regional trade but this has been revised and updated.

Accordingly, the incremental investment required to upgrade border links to Category A is portrayed as a separate investment in the regional trade scenario. This has gained the endorsement of the Minister of Trade but requires further validation by the SLRA in terms of the cost estimates made.

## SPECIFIC PROJECTS AND COST ESTIMATES FOR IIP-B ROADS FOR REGIONAL TRADE

Table 3.8 presents the cost estimate for border road upgrades and fixed weigh station installations at border posts, heavy cargo platforms and other judicious locations. This estimate of $5.5 million would be incremental and additive to the Scenario 1 IIP-B in road infrastructure

**Box 3.2: Fixed Weigh-Bridge Installations**

**ECOWAS** recommends implementation of fixed weighbridges at in three different circumstances:

1. Border posts,
2. Platforms emitting more than 200 000 tons of traffic per year,
3. Judicious locations within the network.

**Recommended for Sierra Leone:**

1. **Border Posts**
   - Guinea Border post on Kambia-Pamalap border Liberia Border post on MRU Bridge border
   - Koindu Border Post
   - Madina Dula Border Post
2. **Platforms:**
   - Freetown Port
   - Cement Factory
3. **Judicious locations:**
   - Freetown-Masiaka
   - Masiaka-Bo

**Table 3.8: Border Road Upgrade Investment Package to Stimulate Regional Trade**

| Category | Projects | Description | Status | Est'd Cost (USD Mn) |
|---|---|---|---|---|
| **Roads** | Bandajuma-MRU Bridge So. Coastal Hwy Link | Memo item; $59m included in CC IIP | Ready to implement Traffic studies, forward projections on potential inter-regional trade flows and cost-benefit analysis to be taken as a preliminary step | |
| | Kamakwie SL to Medina Dula Guinea Road Link* | Upgrade from Category B to A | | 7,5 |
| | Falaba SL toFaranah Guinea Border Road Link | Upgrade from Category B to A | | 6 |
| | Koindu SL to Guekedou Guinea Border Road Link | Upgrade from Category B to A | | 3 |
| | Koindu SL to Voinjama Liberia Border Road Link | Upgrade from Category B to A | | 3 |
| | Bridge across Marama River | Estimate needed | | |
| **Fixed Weigh Stations**** | 4 Fixed Weigh Stations Installed at «Borders, Platforms and Judicious Locations» | Situated at locations specified by ECOWAS transport regulations | | 2 |
| ***Proxy Estimate of Incremental Upgrade Cost based on +$300,000 per km** | | | **TOTAL COST:** | **$21,50** |

2 "Vehicle Overload Control Policy", Ibid.

which was estimated at $503.1 in Table 3.4 presented earlier.

Ideally, this type of IIP might constitute a "regional" type of investment project; it has implicitly been envisaged as such given that it foresees complementary investment in "common" border posts which are portrayed in the next package. At the same time, it is not absolutely essential that Sierra Leone pursue this investment package on a regional basis and, for that reason, it has been compiled to identify the investment needed w–ithin Sierra Leonean territory and border locations at this stage. If pursued on a regional basis, this investment plan would benefit from a broader regional perspective on optimal road linkages and road segment upgrades across borders on the key trade corridors eventually identified. Overall, Figure 3.3 portrays a typical set of problems characterizing regional road infrastructure that has been identified by OECD and PIDA. OECD asserts that road transport projects are best developed on a regional scale to enable regional transport corridors to be better defined, developed and integrated.

"Currently most road infrastructure projects remain country-centered; Africa's regional transport corridors are poorly integrated, face a high percentage of missing links, and lack efficiency." The result is mutual isolation between projects and this severely limits the social and economic benefit which could otherwise be tapped.[3]

An example of this is the missing link between Liberia and Sierra Leone highlighted in yellow on Figure 3.4. Meanwhile, PIDA has identified that the setting up of "one-stop" border posts at every important border crossing would improve trade facilitation along transport corridors, hence the next sector examines trade-related infrastructure including common border facilities infrastructure to improve harmonization.[4]

### IMPLEMENTATION ARRANGEMENTS AND TIMELINE

It is recommended that the upgrading of border roads be sequenced with some degree of priority once investments in regional market infrastructure have been realized. These are considered to have higher priority than completion of the ring road but must be addressed after key arteries carrying the highest volumes of traffic in the interior have been covered. SLRA would be the oversight agent for these border road connections on behalf of GOSL but if it were decided to make this investment package a regional project the initiative should involve the respective ministries of transport and trade.

## BASE IIP IN TRADE INFRASTRUCTURE TO ENABLE FACILITATION OF REGIONAL TRADE

### RATIONALE, KEY OBJECTIVES AND BENCHMARKS FOR TRADE INFRASTRUCTURE

Chapter two has identified that GOSL is ambivalent towards regional trade principally because it is informal and uncontrolled. In order to begin channeling trade along corridors that are monitored, Sierra Leone requires added baseline investment in specific trade facilitation infrastructure, notably common border posts and market centers that are hospitable to traders. At the same time, there is a need for capacity building that would help Sierra Leone and its trading partners improve their trade facilitation skills and harmonize their trade facilitation regulations and management systems.

**Box 3.3: Profile of a Hospitable Market Trading Center**

- Permanent Installation with Roof & Open Air Circulation, capable of hosting traders in all weather, rain or shine
- Paved ground surface
- Paved, secure truck and bus parking facility
- Sanitation facilities
- Guest units to enable overnight accommodation of truckers and traders
- Water supply
- Power supply, grid or solar enabled
- Exterior fencing around compound

### SPECIFIC REGIONAL PROJECTS AND COST ESTIMATES FOR TRADE INFRASTRUCTURE

Two physical infrastructure investments (border posts and market structures) and one capacity building investment are envisaged in this package. These are inherently regional type projects by nature and would see Sierra Leone, Guinea and Liberian participants all being beneficiaries of the capacity building component. The intention with respect to common border posts is to establish facilities that can provide "one stop" processing and scanning of cargo on designated corridors between countries, making cargo transit between countries faster, more transparent and more hospitable to truckers and traders. The installations envisaged would provide separate locations for the immigration and security personnel of each country, but would permit application of common, harmonized procedures for cargo scanning and inspection systems, sanitary and phytosanitary control and quarantine systems, cargo load monitoring and customs control. Personnel assigned to border post functions would be assigned responsibilities for data collection and reporting.

Chapter one identified in Figure 1.9 (reproduced below) the fact that several regional markets had been destroyed in the conflict, including three in Liberia as well as the Koindu market in Sierra Leone. In order to encourage the formalization of cross-border trade, GOSL aims to reconstruct and improve the market infrastructure in three key regional markets that serve domestic and cross border trade, including one at the Koindu location which, over time, will permit revitalization of a former trade corridor which when all the way to Ivory Coast and Mali. The other two would be situated at

3 Investment in Transport Infrastructure in Africa, NEPAD-OECD Africa Investment Initiative, Biau, Dahou and Homma, December 2008, page 13.
4 Study on Programme for Infrastructure Development in Africa (PIDA) Phase 1 'Overview' Sofreco-Consortium, April 2011, page 4.


Barmoi (a major rice, palm oil and gari trading center which services trade with Guinea) and at Bo Waterside to facilitate enhanced trade with Liberia. The location of these three market centers is depicted by green stars on Figure 3.4 presented earlier. The type of market center envisaged is described in the Market Profile text-box above. The third investment project to complete this package is a two-stage capacity building project to enable Sierra Leone and its trading partners to build up their facilitation skills in support of cross border trade. This is envisaged to start as a project preparation facility which would enable the design of a program in conjunction with Liberia and Guinea in due course. It may make sense to situate the PPF stage under the auspices of the Mano River Union Secretariat to take advantage of the MRU's convening power for member states. The MRU provides a forum which will move in line with ECOWAS but could deliver the advantage of faster progress at gaining the political imprimatur of its more limited membership. To begin the process, it would be helpful for GoSL to openly declare the desire and intention to enhance the conditions for trade within the MRU sub-region. A declaration of this sort would logically be followed by consultation with the other Member States to build consensus on a way forward. Table 3.8 presents the total cost estimate for investment in hard and soft trade facilitation infrastructure.

### IMPLEMENTATION ARRANGEMENTS AND TIMELINE FOR TRADE INFRASTRUCTURE

Upon completion of the political legitimacy phase, the MRU Secretariat, with input from member-appointed Technical Commissions, could be delegated authority to move ahead with a technical phase of investment feasibility and detailed design. A project preparation facility would enable member states to delegate representatives and bring a cross-disciplinary approach to regional planning, encompassing expertise in trade, infrastructure and productive economic sectors. The PPF has been deliberately included in order to overcome an observed lack of contact between technical counterparts in member states.

## BASE IIP FOR RIVER TRANSPORT THAT ENABLES REGIONAL TRADE

### RATIONALE, KEY OBJECTIVES AND BENCHMARKS

Chapter one identifies the fact that Sierra Leone has 800 km of waterways, 600 km of which would be navigable all year round if they were dredged and maintained in good navigable order. GOSL identified within its PRSP that it would seek to invest in wharves, docks and dredging so as to tap the lower cost potential inherent in its extensive network of waterways. Since that time, the country has obtained a landing craft and is trying on a pilot basis to become familiar with how to make better use of it in order to pull major rice producing areas out of isolation and make it more feasible to move surplus rice production to markets. At this point, given a somewhat awkward experience with the landing craft and river navigation systems to date, the GOSL has not yet formulated a detailed investment plan. Instead, GOSL would appreciate receiving technical assistance and holistic advice on how they should go about developing the potential of their navigable river system. No cost estimate is included for this item though it remains a type of infrastructure which is considered highly relevant to the food crop production sector.

**Table 3.9: Trading Infrastructure Investment Package to Stimulate Regional Trade**

| Category | Projects | Description | Status | Est'd Cost (USD Mn) |
|---|---|---|---|---|
| **Border Posts**** | 4 Common Border Facilities to service key Border Links and transport corridors | Financial and economic feasibility to be further developed | | 16 |
| **Market Infrastructure** | Inter-Regional Market Platforms in 3 locations | Bo Waterside, Barmoi, Koindu | Preliminary estimate | 12 |
| **Capacity Building** | | | | |
| **Project Preparation Facility** | Regional Collaboration in Trade Project Prep Facility | To enable closer coordination & contact between MRU delegates | | 1 |
| **Regional Trade Facilitation** | Regional Collaboration in Trade | Content to be designed with input from transport agencies, trade, agriculture, mining ministries | | 5 |
| ** Estimated cost based on estimated budget for Southern Coastal Road Border Post installation at Guinea-Sierra Leone border | | | **TOTAL COST:** | **$34,00** |

## GOVERNMENT'S COMPREHENSIVE INVESTMENT PLANS FOR THE POWER SECTOR

While scenario one makes clear that solar crop driers can cost-effectively supply the energy needed to enable post harvest processing and quality upgrading of global export crops, the same is not adequate for the broader food crop production sector. Grid-based power is essential to realize added economic gains from agro-processing of primary commodities. Illustrative examples are oil palm processing plants, of which Sierra Leone had thirteen before the conflict and just one is now operating. Other examples would be plants to process raw fruits into juice or tomatoes into concentrate. In short, continued momentum in Sierra Leone's agricultural sector growth rate requires a major expansion of private sector led agro-industrial activity that transforms primary commodity crops into diversified products. Better supply of reliable and affordable grid-based energy across a wider span of the Sierra Leone hinterland is an essential pre-condition to attract the private investment which GOSL wishes to attract into the food crop production sector.

### RATIONALE, KEY OBJECTIVES AND BENCHMARKS FOR POWER SECTOR IIP

Sierra Leone's PRSP 2 identifies development of electrical power as a key enabler of growth, linking it primarily to the agricultural sector for poverty reduction purposes and designating the power sub-sector as an enabler of industrial development on a larger scale. For the food crop production sector it will remove serious constraints that prevent the milling of rice, the processing of palm tree products into a multitude of other products and enable conversion of other agricultural commodities into preserved and processed products which can be channeled into trade.

This investment package therefore takes the entire GOSL investment plan in the power sector as its baseline and showcases it in entirety before applying selectivity to the components deemed most essential to support food crop production and regional trade. Starting from its low baseline of 7 to 8% electricity access in 2009, concentrated principally in Western province and Freetown, Government has developed an ambitious vision aiming to deliver 75% household access and 98% uninterrupted supply to agriculture, mining and industrial sectors by 2025.

To that end it has developed target benchmarks both for solar power and for grid based electricity supply for short (2015), medium (2020) and long term (2025) planning horizons as reflected in Table 3.9. Table 3.11 presents an overview of the expected supply, demand, consumption and import/export evolution of Sierra Leone's power sector and sets out a number of performance indicators which are expected to improve from their current baseline.

Government investment objectives in the power sector pertain to each respective level of the industry, notably generation, transmission and distribution, with a separate initiative devoted to rural electrification. Reform objectives pertain to unbundling sector structure, improving governance and strengthening sector institutions. These include regional harmonization measures to pave the way for effective participation in West Africa's regional energy market through the CLSG/WAPP transmission project.

### NATIONAL AND REGIONAL PROJECTS AND COST ESTIMATES FOR POWER SECTOR IIP

**Power Generation**. A key pillar of Government's power sector development plan is to dramatically tap its domestic electricity generation potential and Table 3.10 reflects Government's desire for a sixteen-fold increase, reaching 800 MW of installed capacity by 2020. GOSL aspires to attract significant PSP in order to achieve this vision and especially to complete it within the timeframes identified. The plan also reflects an assumption that domestic demand will be stimulated not only by agro-industry, but also by the mining sector. What is not consumed domestically could be exported into the WAPP energy market,

**Table 3.10: GOSL Objectives for Power Supply to Key Economic Sectors**

| Expressed Objectives for Power-Enabled Sector Development | | | | | | |
|---|---|---|---|---|---|---|
| **Target by Economic Sector** | **2010 to 2015** | | **2016 to 2020** | | **2021 to 2025** | |
| **Installed Capacity** | 50 MW | 627 MW | | 800 MW | | |
| **Electricity Production** | | 5,550 GWh | | 7000 GWh | | |
| | **User Access** | **Solar Penetration** | **User Access** | **Solar Penetration** | **User Access** | **Solar Penetration** |
| **2009 Baseline** | 7 to 8% | Essentially 0% | | | | |
| **Households** | 30% | 1% solar in homes | 50% | 3% solar in homes | 75% | 5% solar in homes |
| **Commerce & Services** | 100% | 1% solar in hotels etc | 100% | 5% solar | 100% access; 98% uninterrupted | 10% solar |
| **Agriculture** | 40% | 1% for lighting, irrigation & crop drying | 70% | 10% solar for lighting and irrigation; 3% for crop drying | 100% access; 98% uninterrupted | 15% solar for lighting and irrigation; 5% for crop drying |
| **Industry** | 100% | N/A | 100% | N/A | 100% | N/A |
| **Mining** | 100% | N/A | 100% | N/A | 100% | N/A |
| **Transport** | Traffic lights in Western, Bo, Kenema, Makeni | | Traffic lights installed in all district HQ towns | | Traffic lights installed in all major towns | |

## Table 3.11: Power Sector Market Development Forecast and Performance Indicators

| Power Sector Development Targets and Indicators | | | | | |
|---|---|---|---|---|---|
| **Targets** | **2010 Baseline** | **By 2013** | **By 2015** | **2016 to 2020** | **2021 to 2025** |
| **Generation (MW)** | | | | | |
| Installed Capacity (MW) | 17.4 GWh | 98 MW | 144 MW | | |
| **Supply (GWh)** | | | | | |
| Domestic | | | | | |
| Imports | 63 incl BHP/Bumbuna | | 627 | 800 | 800 Assumed |
| Less: Exports | | | | | |
| **TOTAL** | | | 5550 | 7000 | Assume 7000 |
| **Performance Indicators** | | | | | |
| Technical Losses as % of Supply | 0,189 | | | | New target benchmarks to be determined |
| Non-Tech. Losses (Theft) as % Supply | 0,219 | | | | |
| Average electricity tariff (LE or US¢) | Le 1800 | | | | |
| Cost of power from BHP | $0.15/KWh | | | | |
| Generation costs from thermal | $0.3 to $0.4/KWh | | | | |
| Generation costs from ABSL | | | | | |
| Current electricity rates to domestic: | $0.31/KWh | | | | |
| Current electricity rates to industry: | $0.41 to 0.54/KWh | | | | |
| Collections rate: | 0,65 | | | | |

although Sierra Leone's aspiration is for local demand to largely consume domestically generated supply.[5]

Expansion is to proceed in two stages.

**Stage 1:** 2009 -2015

Expand generation based on expansion of Bumbuna in one phase to increase total installed power to 400 MW with average annual production of 1,560 GWh, enabling domestic supply to meet the ever growing demand for electricity from Freetown and the surrounding areas. Build out other large and small hydro (SHP) schemes plus thermal power generation sets, all on a national basis, to bring total installed capacity of 627 MW, resulting in total electricity production of 5,550 GWh per annum by 2015. This will include a power purchase agreement with the Addax Bio-Energy Sierra Leone (ABSL) private power producer whose supply will be generated from by a sugar cane by-product (bagasse) when the ABSL plant comes on stream in 2013. With respect to smaller schemes, develop and upgrade SHPs at Portloko, Moyamba, Orogun, Kenema (Dodo), and Guma Dam. This stage aims to enable them to serve their communities and make them an integral part of the national grid.

**Stage 2:** 2015-2010

Expand generation further based on development of Benkongor (Phases 1,2,3) plus mini-hydro schemes, thermal, natural gas and 2% renewable energy to give a total installed capacity of 800 MW, resulting in total electricity production of 7,000 GWh per annum by 2020.

### Box 3.4: CLSG Project Description

The CLSG project involves the construction of a high voltage transmission line approximately 1360 km connecting Côte d'Ivoire, Liberia, Sierra Leone, and Guinea. The transmission line will consist of approximately 150km in Côte d'Ivoire, 100 km in Guinea, 500 km in Liberia and 550km in Sierra Leone. The selected line route passes through the sites of future hydraulic plants (Yiben and Bikongor in Sierra Leone and Mano in Liberia). In addition, 225/33 kV substations are connected to this line to supply networks for the rural electrification. Construction will commence in 2011 and commissioning is scheduled for 2013. The objective of the interconnection is to facilitate the exchange of power and low-cost energy initially from Côte d'Ivoire which currently has power and energy that it wishes to upgrade to the post conflict countries of Liberia, Sierra Leone and Guinea which currently experience energy deficits; and ultimately lead to the development of hydro power sources in the region.

**Transmission**. Sierra Leone's National Energy Strategic Plan confirms the objective of promoting "energy integration as part of the economic integration of West African States." To that end, the nation seeks to participate in WAPP CLSG transmission project in order to gain access to the region's interconnected energy market, and it is also interested to participate, potentially as a supplier of newly identified off-shore gas, in the West African Gas Pipeline. WAPP/CLSG is well advanced in its preparation and it is profiled in the accompanying text-box, whereas further development of WAGP is presently on hold.[6] Both of these projects are of a regional nature. The entry into WAPP through the realization of CLSG and participation in the wholesale transmission function will bring many advantages which bear further mention, particularly as they help to achieve regional integration goals. These include:

- Highly strategic location of the transmission line across the interior of the country which will permit relatively lower cost build-out of the national distribution system;
- The opportunity to gain a lower cost supply of electricity, particularly if Sierra Leone considers participation as an importer in the medium term;
- Greater absolute assurance that supply will be able keep up with demand;
- Reduced vulnerability to drought induced shortages due to greater overall supply;
- A larger potential market enabling Sierra Leone to become an energy

5 The CLSG/WAPP Feasibility Study forecasts a much more modest evolution of Sierra Leone demand, projecting that it will reach 167MW by 2020 and 257MW by 2030. Of this, the assumption is that a single mining operation will require a steady state supply of 22MW annually from 2015 onwards. GOSL officials are assuming that mineral transformation objectives will require a larger supply of reliable power—on the order of 450MW per annum.

6 Expansion of WAGP is presently at a standstill due to various complexities, including the fact that Ghana may no longer have a demand if it can tap its own off-shore gas reserves (recently discovered) and Nigeria might choose to channel its supply domestically for rural electrification. Sierra Leone would need to become active in revitalizing interest by the Commission or the pipeline participants to expand its reach.

exporter in the longer term;

- The sharing of generation reserves between main systems which enables PSP and reduces the risk to investors that domestic demand does not keep up with supply generated nationally, and
- The likely reduction of peak demand among participating countries when the grid begins to serve the entire region.

Current plans are to set up a Regional Special Purpose Vehicle to own and operate the CLSG transmission assets on behalf of the countries participating in this investment project. There are a number of complexities and preparatory steps associated with establishment of this regional entity and these are discussed further in the Action Plan measures below.

**Distribution**. Sierra Leone suffers from the fact that it basically has no 'national' electricity distribution grid insofar as the only grid presently functioning is that which serves Freetown which is only part of Western Area. Yet, due to the completion of Bumbuna I generating plant and the completion of a 161 KVA domestic transmission line in April 2011, the national grid will gain a degree of expansion enabling uptake of all the generation capacity which Bumbuna I can deliver. Further expansion of the domestic electricity grid has not undergone detailed feasibility planning at present, though a ballpark estimate for grid expansion has been identified by NPA, coming in at $140 million as a "conservative" estimate.

Electricity distribution can present a more difficult segment than generation in which to attract private participation and competition, and yet it can be done if the policy environment sets a level playing field and tariff regulation enables participants to earn a fair return. The NPA will continue operating as a restructured enterprise serving the distribution function in the interim and whether distribution functions will ultimately be under public or private ownership depends on the feasibility of privatization. A recommendation is to concession out the operation of Bo-Kenema generation and distribution facility as a separate entity and that could provide the pilot basis to deepen local experience with PSP in distribution. Regardless of ownership, it is important that NPA be enabled to recover its financial strength and become a vibrant enterprise able to contribute to future power sector performance. To date, most distribution has been concentrated in Western Province, with a minor exception of that distributed in the interior towns of Bo and Kenema. There is, therefore, substantial investment required to extend distribution by grid further into the interior. Some of this will be done through extension of the formal grid, and some degree of rural electrification will be done by off-grid expansion of power supply. The estimated cost of rural electrification is rather preliminary (and conservative) at this stage and will be fleshed out further as the Rural Electrification plan makes progress. The CLSG infrastructure will give Sierra Leone a good head-start in making it possible to build out a distribution backbone off of sub-stations supporting the inter-regional transmission line.

**Rural Electrification**. GOSL has established a national multi-stakeholder group on Energy Access under the leadership of MEWR to lead a three year action plan that will culminate in a comprehensive rural energy program by March 2014. Because of poverty issues and the high cost of formal grid extension, the dominant approach to rural electrification will privilege off-grid solutions for remote areas and extension of the transmission and distribution grid to urban centers. This plan includes efforts to inventory the current modes by which rural electrification is already being achieved and to extract the lessons which may be applicable for wider replication that could inform the development of a "multi-functional platform" which will be piloted in ten villages. Meanwhile, a number of renewable power generation projects are being developed to tap Sierra Leone's extensive resources in solar, wind and mini hydro-based power supply. Project proposals are under preparation to scale up and replicate multi-functional platforms developed on a scale to supply power to a school, a village clinic including refrigeration, external lighting and a town hall facility or community center. This would be rolled out to 100 pilot villages during the trial period. The intention is for full scale implementation of grid and non-grid based rural electrification to begin implementation commencing March 2014.

Table 3.12 assembles the investment package of power sector projects which are needed to accomplish the national electrification objectives. Government aspires to attract the private sector to invest in several of the large scale downstream

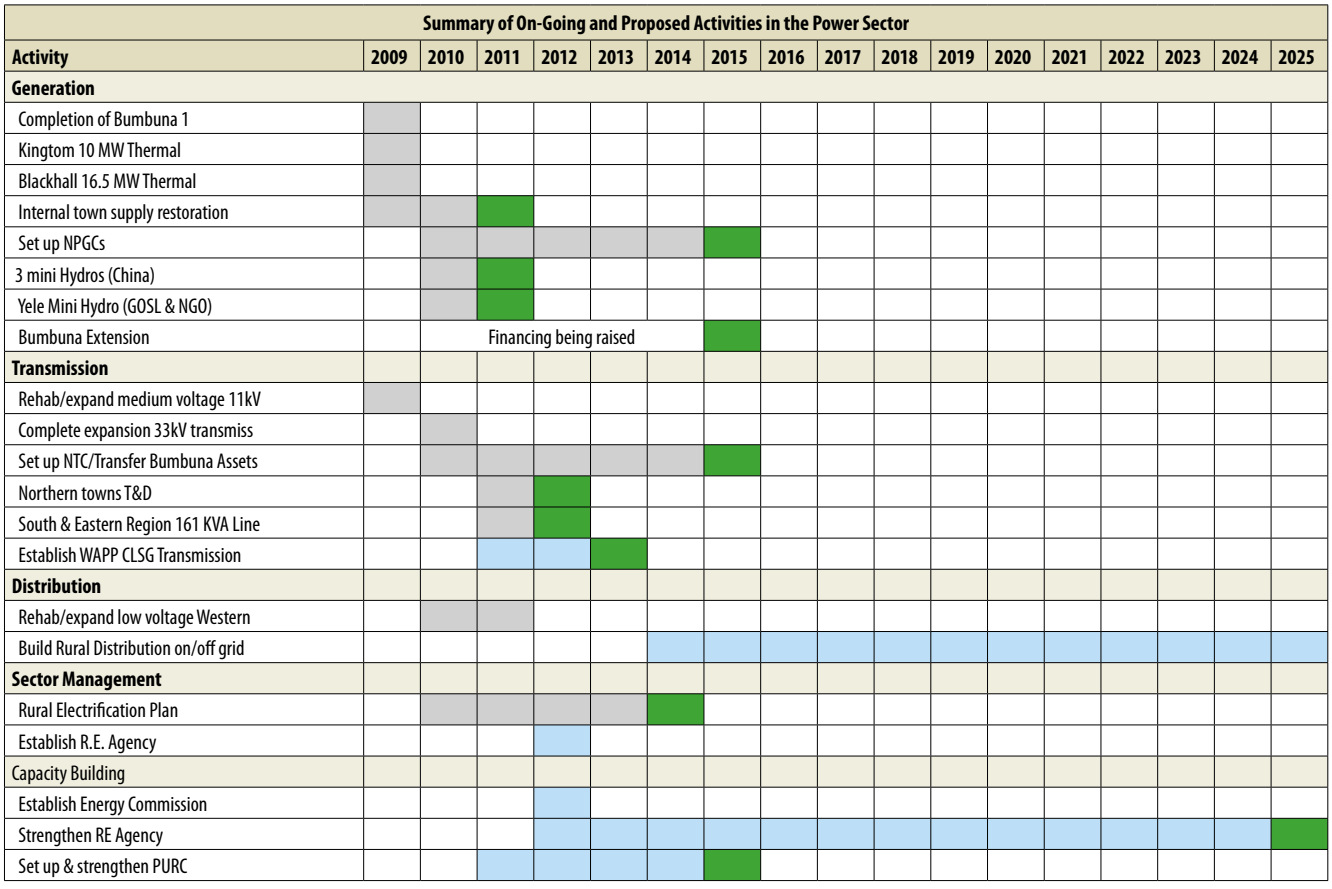
**Figure 3.4: Planned CLSG Transmission Line Across Sierra Leone & Sub-Region**

## Table 3.12: Government's Total Investment Plan for Power Sector Infrastructure

| Project Title | Description | Status | Est'd Cost (USD) |
|---|---|---|---|
| **Generation** | | | **Millions** |
| ABSL (Addax Bio-Energy Sierra Leone) | ABSL is planning sugarcane production of 82,000m$^3$ of ethanol for export to EU. Waste product bagasse will generate 30MW of which 15 MW will be fed into national grid through a PPA with NPA | Secured. Costs represent est'd 40% of total investment in combined ethanol/power plant | $45,50 |
| Bumbuna II, III & IV | | Preparations Underway | $748,80 |
| Bekongor Hydro | | Pre-Feasibility | Not yet avail |
| Bagbe-Bafin River Hydro | | Pre-Feasibility | Not yet avail |
| Kamatimbo Hydro | | Pre-Feasibility | Not yet avail |
| Solar Power | Solar electricity will deliver non grid based power supply to high potential rural zones and institutions | Preliminary Estimate | $11,50 |
| **Transmission** | | | |
| Establish WAPP CLSG Transmission | Installation of 559 km of transmission lines from Lib border at Mano River to Linsan in Guinea. Posts at Kenema, Bikongo, Bumbuna, Yiben, Kamakwie | Financing secured; Closure Imminent, Commencement in 2011 | $479,52 |
| **Distribution** | | | |
| Build Rural Distribution off WAPP | Included in the Rural Electrification Plan below | Pre-Feasibility | $140,00 |
| **Sector Management** | | | |
| Sector Unbundling and reform | Sector Reform Project yet to be appraised | Preliminary Estimate | $15,00 |
| Rural Electrification Plan | Sector Reform Project yet to be appraised | Preliminary Estimate | $15,00 |
| **Capacity Building** | | | |
| Establish & strengthen sector regulators | Capacity Building Project yet to be appraised | Preliminary Estimate | $5,00 |
| Establish and strengthen RE Agency | Capacity Building Project yet to be appraised | Preliminary Estimate | $5,00 |
| | | **SECTOR TOTAL:** | $1 465,32 |

* Represents total regional cost of CLSG/WAPP. Estimated portion attributable to Sierra Leone is $198 million.

## Table 3.13: Timeline of Proposed Activities in the Power Sector



generation projects while it will look to public and development partner sources to address the financing needs for transmission and rural electrification. This approach indicates that Sierra Leone visualizes a hybrid power sector embracing both public and private investment in power sector infrastructure.

### IMPLEMENTATION ARRANGEMENTS AND TIMELINE FOR GOSL POWER SECTOR

Table 3.13 presents the timeline for implementation of the power sector development plan, starting with current projects underway and others yet to come on stream. This identifies that the WAPP/CLSG project is due to commence in 2011 and be ready for commissioning in 2013. The installation of this regionally linked infrastructure will be a key platform which could determine the timing and realization of other aspects of power sector development.

For instance, the CLSG transmission line and sub-station infrastructure will provide the platform off which to build further electrical distribution within the interior. Likewise, the supply situation in neighboring countries when networked through the transmission line into the regional grid could cause Sierra Leone to speed up or decelerate planned generation projects for reasons explored in the paragraph below. Meanwhile, timing remains uncertain with respect to generation projects because Sierra Leone wants to prioritize PSP in the realization of these large projects and much depends on success in raising the financing. Finally, the timeline portrays the fact that advancing rural electrification is expected to take two decades and will even continue thereafter.

### PROPOSED IIP-B COST ESTIMATE TO STIMULATE REGIONAL TRADE

The sections above identify Government's comprehensive investment plans for the power sector. The level of investment identified is more extensive than is needed to overcome the lack of electricity which is a binding constraint to further growth in the food crops and agro-processing sectors. The investment in the extension of Bumbuna generating plant is not essential for this sector. What is sufficient is the combination of all other investments included in the GOSL plan, notably those permitting energy imports via the WAPP transmission line together with investments to build out the domestic grid, install off-grid electrification in the rural milieu and introduce a soft-side package of sector management reforms and capacity building. The estimated cost of this reduced "base" package to release growth from this sector is therefore $708.5 million.

## BASE IIP FOR IRRIGATION TO ENABLE REGIONAL TRADE

### RATIONALE, KEY OBJECTIVES AND BENCHMARKS

Chapter one identified that rice is a favorite staple in Sierra Leone which is in high local demand for food security purposes as well as for export to neighboring countries. The country therefore has a comprehensive NRDP to achieve self-sufficiency in rice. This plan relies fundamentally upon a change in cropping and land use pattern to encourage cultivation of rice under irrigated conditions to yield three harvests a year. Whereas chapter two identified the fact that GOSL has made tremendous progress in expanding the area and yield of rice, the binding constraint at present is the lack of investment in irrigation systems for rice. GOSL's preference is for the private sector to take the lead role in investing in irrigated rice production but this has been slow to materialize and there may be a need for GOSL to take some initial risk and demonstrate the true commercial potential of rice production under irrigated conditions. For this reason, irrigation investment is considered a base requirement to release higher output and productivity in this sector.

### SPECIFIC NATIONAL AND REGIONAL PROJECTS AND COST ESTIMATES

Under the Smallholder Commercialization Program an estimated $18 million is required for irrigation infrastructure. This requires validation by MAFFS taking into account the portions to be financed by public versus private sector sources. The assumption here is that the split will be 25 percent public and the balance private. More specific details are not available on the hectares, location or timing of how this package would be invested.

## OPTIONAL INFRASTRUCTURE INVESTMENT PACKAGE FOR REGIONAL TRADE GROWTH

Table 3.6 identifies that the growth of food crop production and expanded output from agro-processing would benefit from optional infrastructure investments in measures that improve the attraction of Sierra Leone as an investment destination (Freetown hub), plus rail transport and ICT. These are presented in declining order of importance in the paragraphs below.

### RELEVANCE, PRIORITIES AND COST ESTIMATES FOR IIP-O REGIONAL TRADE

- ICT: Better internet and mobile communications systems would support better dissemination of news about local and regional market conditions for crops in rural market centers. It would also help with the timely communication about demand for inputs and would also stimulate better systems of rural finance by reducing transaction costs through use of technology. All of these are vital to support the paradigm shift from subsistence to commercial production and induct farmers more into the market based agricultural economy. Information of interest to food crop producers includes information on prices and market locations where purchase of surplus production is taking place.

It is not expected that ICT investment will extend internet access down to the farm gate in the near term, however, it can be expected over time to reach market centers and farming support centers and thereby provide a greater public service to Sierra Leone's primary food crop producers. The cost included for the "option" package of ICT investment is that

pertaining to phase 3 expansion of the terrestrial fiber optic distribution network.

- Rail Transport: Rail transport, if reinstated in Sierra Leone, would facilitate transport of food crop cargo within Sierra Leone and to key destinations at terminus locations. This type of investment is of relevance insofar as rail freight would offer a cost competitive alternative to road freight but the cost differences cannot be estimated given that no specific rail investment package has yet been identified. It should be indicated, however, that food crop output could not, by itself, justify the cost of investment in rail infrastructure but this sector would be a supplemental user of rail infrastructure justified by mineral sector transport.
- Tri-Partite Investment in Accessibility of Freetown: For the same reasons mentioned earlier, improvement of the investment climate is a major policy objective to deliver on GoSL's objective of encouraging private sector led growth. This is applicable in the food crops sub-sector insofar as there is a desire to attract private investment into agribusiness and agro-processing as well as large scale irrigated rice cultivation.

### CONSOLIDATED COST AND FINANCING ESTIMATES FOR REGIONAL TRADE IIP

**Table 3.14:Regional Trade IIP Base and Option Cost Estimate and Financing Plan**

| Sector | Project Category | Food Crop Regional Trade | Total Cost Estimate | Financing Targets | | | Financing Secured | | | GAP |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Public | Dev't Partner | Private | Public | Dev't Partner | Private | ALL |
| **Road Transport** | Interior Trunk Roads | Base | **$808,49** | $330,40 | $478,09 | $0,00 | $330,40 | $122,06 | $0,00 | $356,04 |
| | Feeder Roads | Base | **$25,01** | $1,18 | $16,79 | $0,00 | $1,18 | $16,79 | $0,00 | $7,04 |
| | Border Trunk Roads | Base | **$5,50** | $0,00 | $5,50 | $0,00 | $0,00 | $0,00 | $0,00 | $5,50 |
| **Trade** | Cross-Border Trade Infrastructure | Base | **$34,00** | $0,00 | $34,00 | $0,00 | $0,00 | $0,00 | $0,00 | $34,00 |
| **River Transport** | River docks, Wharves & Dredging | Base | **N/A** | | | | | | | |
| **Power** | Generation, Multiple | Base | **$49,00** | $0,00 | $0,00 | $49,00 | $0,00 | $0,00 | $49,00 | $0,00 |
| | CLSG WAPP | Base | **$479,50** | $0,00 | $479,50 | $0,00 | $0,00 | $479,50 | $0,00 | $0,00 |
| | Distribution; build out grid | Base | **$140,00** | $0,00 | $140,00 | $0,00 | $0,00 | $0,00 | $0,00 | $140,00 |
| | Sector Reform & Capacity Building | Base | **$40,00** | $0,00 | $40,00 | $0,00 | $0,00 | $0,00 | $0,00 | $40,00 |
| **Water** | Irrigation | Base | **$18,00** | $0,00 | $4,50 | $13,50 | $0,00 | $0,00 | $0,00 | $18,00 |
| **ICT** | Inter-Regional | Option | **$12,80** | $0,00 | $0,00 | $12,80 | $0,00 | $0,00 | $0,00 | $12,80 |
| **Area Development** | Freetown Hub | Option | **N/A** | | | | | | | |
| **Rail Transport** | Inter-Regional | Option | **N/A** | | | | | | | |
| **TOTAL Cost Estimate, Financing Plan and Funding Gap:** | | | **$1 612,29** | **$331,58** | **$1 198,38** | **$75,30** | **$331,58** | **$618,34** | **$49,00** | **$613,38** |

# 4. Scenario 3 - Infrastructure investment package for ICT sector growth

Building off the back of telecommunications sector reform and expansion over recent years, Sierra Leone intends for the next decade to usher in major improvements in access to the internet, bringing with it substantial progress in closing the digital divide and advances in the productivity of information and communications technology.

While the sector will, itself, generate jobs and economic growth, hopefully replicating that impact from liberalization of mobile telephony, it will also serve as a tremendous enabler of performance and efficiency gains in other sectors of the economy. This section identifies the infrastructure package needed to release the latent growth potential of the ICT sector as summarized in Table 3.15.

## BASE INFRASTRUCTURE INVESTMENT PACKAGE (IIP) FOR ICT AND SOLAR ELECTRICITY

The base IIP for ICT sector expansion includes solar energy as an integral part of the investment package and thus it is presented together with the portfolio of base case investment projects needed to bring broadband internet into Sierra Leone and establish a national fibre optic backbone.

### RATIONALE, KEY OBJECTIVES AND BENCHMARKS FOR ICT SECTOR EXPANSION

Sierra Leone missed out on participating in the first SAT 1 submarine cable that was laid along the West African coast due to its on-going conflict and, as a result,

**Table 3.15: Infrastructure Investment Package Recommended for ICT Sector Expansion**

| Sector | Project Category | ICT |
|---|---|---|
| **ICT** | International Link | Base |
| | National Links | Base |
| | Enabling Environment | Base |
| | E-Applications | Base |
| **Power** | Expansion of domestic Grid | Option |

the country is behind others in the region and has one of the lowest rates of internet usage in the world. This IIP would begin to close the digital divide and connect Sierra Leone to the global economy, making the investments in other sectors reliant on regional and global trade much more productive. Sierra Leone's objectives for the ICT sector represent a combination of national and regional objectives. On the regional front the intention is to become a participant in the Africa to Europe consortium that will lay submarine cable around the Western side of the African continent and thereby gain a landing station and access to broadband internet. This will be supplemented by investment to connect into the regional ECOWAS communications grid in line with the "missing links" expansion strategy for the community. On the national front, the intention is to multiply seven-fold the ICT penetration rate from the current low level of 0.27 percent to 2 percent between now and 2015. Table 3.16 presents the nation's targets with respect to ICT sector performance. This will be achieved by connecting into the submarine fiber optic cable being established by on behalf of the Africa Connect Europe consortium, by establishing a landing station in Sierra Leone and by building out a terrestrial backbone that delivers broadband service deeper into the interior.

The cost of internet service is intrinsically connected to the evolution of demand and as the latter goes up, the former will go down. Taking experience from other countries into account, Sierra Leone can also expect internet costs to decline dramatically and this will lead to a virtuous cycle of expanded demand. As a member of the ACE consortium, Sierra Leone's participation guarantees the countries access to approximately 2.8 percent of the total cable capacity. At the same time, landing stations will be established in neighboring West African countries and the generalized improvement in regional connectivity will enable the pursuit of further ICT integration on the regional front. This will enable installation of a terrestrial backbone that will penetrate Sierra Leone's interior and connect across to the same across borders with Guinea and Liberia. It will also enable Sierra Leone to join an E-Government VPN network, ECOWAN, bringing Sierra Leone government employees into closer contact with counterparts in REC Member States and in the ECOWAS Commission itself.

**Table 3.16: Performance Baseline and Targets in Sierra Leone's ICT Sector**

| ICT Benchmarks | Sierra Leone | | | | |
|---|---|---|---|---|---|
| | Baseline | | 2012 | 2014 | 2025 |
| Main Line density | | 0,52 | | | 0,43 |
| Mobile density | 2008 | 25,0 | | | |
| Internet Users | 2008 | 16 000 | | | |
| Access to internet services | | 0,27% | | | 2,00% |
| Price basket for internet (US$/mo) | 2006 | $10,68 | | | |
| Average Satellite Price per 1MBPS | | $4000-$5000 | | | $200 to $500 |
| Vol. Int'l traffic, gigabytes | | From 40 k/bit p/person to 3 gig and then 6 gig in 25 yrs | | | |
| Avg Monthly price wholesale E1 link | | | | | 2000 |
| Number of direct project beneficiaries | | | | | 3.2 million |

## SPECIFIC NATIONAL AND REGIONAL PROJECTS AND COST ESTIMATES

This section begins with a detailed description of the planned investments, including their institutional arrangements and the means by which the private sector will be enabled to participate in the institutional entity which will house the landing station within Sierra Leone. This, in itself, will deliver a powerful message to the region and to the world by demonstrating how a recovering fragile state can succeed in attracting private investment from foreign and national sources to finance long lived infrastructure.

**Investment in International Connectivity and a Terrestrial Landing Station.** Sierra Leone, Guinea, Liberia, Guinea-Bissau, Gambia and Togo represent a small contingent of countries in ECOWAS that have been particularly left behind by earlier generation submarine cable consortia due to the small size of their economies or because of conflict prevailing when earlier cables were laid. It is time to catch up and the laying of a new submarine cable by Orange Telecom has initiated the creation of an Africa to Europe (ACE) consortium which will provide that opening. The text box below presents a press release issued by ACE upon the entry of Sierra Leone and other ECOWAS countries into the consortium in June of 2010. It describes how a 14,000 km submarine cable will be laid during 2011 from France to South Africa, bringing a landing station

### Box 3.5: ORANGE Telecoms Press Release, June 5, 2010

The ACE (Africa Coast to Europe) submarine cable system, which will stretch from France to South Africa, connecting all countries along the West coast of Africa, **welcomes new members**. Six new telecommunication operators joined the ACE consortium recently, namely Etisalat Nigeria, Expresso Telecom Group (Mauritania, Senegal, Ghana, Nigeria), **Globalink (Sierra Leone)**, Mauritius Telecom, Office Congolais de Poste et Télécommunication (Democratic Republic of Congo) and **Sierratel,(SierraLeone).**

In addition, Baharicom Development Company Ltd., supported by the NEPAD's (New Partnership for Africa's Development) eAfrica Commission of the African Union, joined ACE as a major partner in October 2009, to jointly build the ACE system.

The ACE system will be a key driver of Africa's social and economic growth. Baharicom, in collaboration with philanthropic organizations, will establish a broadband capacity philanthropic endowment to provide capacity grants for health, education, development programs and charitable institutions throughout Africa. The new members reinforce the structure of ACE and demonstrate that its strategy is attractive to African telecommunication operators and is seen as an effective way to meet their international traffic requirements.

The ACE consortium currently comprises twenty five parties: Baharicom Development Company, Benin Telecoms, Camtel, Côte d'Ivoire Telecom, Companhia Santomense de Telecomunicacoes, Etisalat Nigeria, Expresso Telecom Group, France Telecom, Gamtel, Getesa, Globalink, Maroc Telecom, Mauritano-Tunisienne des Télécommunications, Mauritius Telecom, Office Congolais de Poste et Télécommunication, Orange Bissau, Orange Cameroun, Orange Côte d'Ivoire, Orange Guinée, Orange Mali, Orange Niger, Orange Spain, **Sierratel**, Sonatel and Togo Telecom.

The ACE submarine cable system, which will be more than 14,000 km long, will be ready for service in 2011. The system will include state-of-the-art submarine cable technology with a minimum capacity of 1.92 Tbit/s, which is capable of supplying the network connectivity required to meet the needs of many countries and secure international traffic. ACE will complement existing submarine cables (SAT-3/WASC/SAFE, SEA-ME-WE.3, ATLANTIS 2, etc.) and will offer the West African coastal region excellent connectivity to telecommunications networks in Europe, America and Asia.

to Freetown carrying 1.92 Terabits of capacity per second and ushering Sierra Leone and a host of other African nations into the era of modern internet and communications technology.

Meanwhile, better serviced countries such as Nigeria, Mali, Benin, Ivory Coast, Senegal and Ghana have also joined the consortium in order to gain redundancy for their existing systems and to gain the benefit of better cross-regional infrastructure in ICT. These measures reflect an overall desire on the part of West African nations to create a region-wide telecommunications market which fills the gaps in missing infrastructure and allows for downstream synergies to be built off of existing national and WAPP infrastructure to better integrate the region.

For those countries with existing power transmission facilities connected within WAPP, a regionally-driven ICT initiative will enable fiber-optic cable to piggy-back onto existing power infrastructure, thus inter-connecting and aggregating traffic within and between countries. This permits build out or densification of terrestrial backbones and allows aggregation and management of traffic from all of the submarine cables which serve the ECOWAS Region. This would provide redundancy to existing routes to submarine cables (in cases where buried fiber is cut or damaged), a diversity of routes, and would complete missing gaps in the ECOWAS ICT architecture. This region-wide effort will be spearheaded by a four-phase West Africa Regional Communications Infrastructure Program to enable ECOWAS to capitalize on the ACE opportunity and address its connectivity gaps. For a country like Sierra Leone, for whom the realization of planned investments under WAPP will materialize on a slower time frame, there would be a time-gap between the landing of the cable and its extension into the interior. For this reason, Sierra Leone has developed an alternative fast track mode for building out its terrestrial backbone and connections to neighboring countries and this is the second investment project profiled in the section below. Meanwhile, Sierra Leone is working with Liberia to capitalize on the opportunity presented by the ACE consortium to undertake three components of activity:

1. Achieve international connectivity connecting the submarine cable into a national landing site and terrestrial establishment of a high speed virtual private network connecting selected government institutions based in Freetown.

2. Create an enabling environment for connectivity including improvements in the policy and regulatory environment to encourage competition, institutional measures to strengthen viability of incumbent operators and measures to promote PPPs that enable private sector participation.

3. Undertake project implementation, monitoring and evaluation.

Participation in this endeavor will take Sierra Leone down several bold new paths to embrace deeper regional participation and integration on one hand and broader opening of the economy on the other. With respect to the first aspect, not only will the planned investments provide better communication links with the region, but the country will need to submit to regional regulation of the submarine cable systems as well as, eventually, the broader terrestrial network. West Africa Telecommunications Regulatory Authority will be called upon to distinguish between national and international jurisdictional issues and will serve the function of regulating excess fiber capacity on power lines and associated issues, such as the provision of excess capacity for commercial use, cross border licensing and interconnection.

With respect to the opening of Sierra Leone's economy, this is due to occur on two fronts via renewed measures to liberalize the competition framework within the sector as well as opening the way for private participation in the special project vehicle charged with managing the landing station for Sierra Leone's international gateway connection. The PPP model is described in the accompanying box. With respect to competition, there is a need to address the de facto re-monopolization of the incumbent fixed line telecommunications operator, SierraTel, over the international gateway which occurred following passage of the 2006 Telecommunications Act. This legislation stipulated in Article 33 (5) that "The incumbent operator shall own and operate the only international gateway for a period of two years after the commencement of this Act and shall thereafter be renewed by the Commission". Upon expiry of the two-year exclusivity period in August 2008, it was extended for five more, till 2013, through a Ministerial Cabinet Decree. However, reflecting GOSL efforts to improve connectivity, the Minister of Information and Communication announced in May 2010 a process to re-liberalize the international gateway and preferences now appear to favor gradual liberalization beginning with a duopoly until such time as the submarine cable begins operations. WARCIP will provide support to this reform process.

**Box 3.6: Reconciling a Need for Speed and for Private Sector Participation**

50% of its interest in the ACE Consortium to the private sector Sierra Leone needed to act quickly in order to participate in the ACE consortium and secure a national landing station. To meet the requirements for speed and also preserve the ability to gain private sector participation in an increasingly liberalized ICT sector, Sierra Leone incorporated a 100% Government owned company, Sierra Leone Cable (SALCAB) under the Company Act as a business enterprise on March 26, 2010 as the institutional conduit for participation in ACE and house the landing station. The intent is that this Special Purpose Vehicle will later be privatized. The plan is for GoSL to divest at least with Sierra Leone citizens, businesses and foreign investors having the opportunity to buy shares. Technical assistance will help GoSL to determine a comprehensive PPP framework. This will include a focus on the landing station functions, the amount of ownership required for government to maintain strategic involvement, resale of and access to submarine cable bandwidth.

**Investment in Terrestrial Backbone and E-Government** Sierra Leone's ICT policy places significant emphasis on e-government and the potential for ICT to improve government connectivity and the quality of services. A dedicated Communication Directorate has been established within MOCI for this purpose, mandated to focus upon development of ICT policy

and ensure that technology enables improvements in service. To that end, Sierra Leone is especially eager to participate in an ECOWAS Commission initiative to develop a modern terrestrial fiber optic regional backbone and wide area network—"ECOWAN" which links nodes in all 15 member states.

Different from the situation which prevailed when submarine cables were first laid around West Africa, GOSL does not want to be a laggard vis-à-vis the ECOWAN initiative. GOSL is preoccupied with the urgency of providing "last mile" solutions to its rural population in order to improve the delivery of services and reduce perceived and actual disparities between urban and rural segments of society. Consequently, the option of waiting until WAPP transmission line infrastructure is established to build out the terrestrial backbone is unpalatable. With development partner support, government is therefore pursuing an alternative open access regime that will lay cable over 610 km in the right-of-way beside major roads across the country and joining up the country and linking it with towns in Liberia and Guinea.[8]

Last mile access will be provided by using solar energy to power Worldwide Interoperability for Microwave Access (WiMAX) which can provide broadband wireless access up to 50km with appropriate applications. This backbone will then enable a more comprehensive implementation of an e-government platform to serve the nation and connect with regional applications. This project has the critically important strategic objective of promoting national integration and stability, while also improving regional communication infrastructure and enabling further private sector participation in the sector. The project has three downstream phases and five components. Phase 1a would lay 246 km of supplemental fiber optic cable along nine routes to deliver more points of connections with neighboring countries; phase 2 would lay 347 km to effectively join up a terrestrial "ring" around the country and the final phase would add another 521 km to connect strategic locations such as mining sites, tourist destinations and district headquarters. The five components would include:

1. Support for the enabling environment, feasibility and environmental impact assessment
2. Design of the terrestrial fiber optic infrastructure
3. Deployment of the fiber optic backbone and WiMAX equipment
4. Project implementation support and
5. Operations and Maintenance.

A parallel project is also planned to build out a fibre optic "ring" to supply broadband internet to the metropolitan area of Freetown. The proposed terrestrial fiber optic backbone network will be a broadband end-to-end architecture based on an all-IP platform to manage voice services. It will encompass broadband wireless products, carrier Ethernet system, voice solution and all packet technology with no legacy circuit telephony.[9] This is deemed to offer the advantage of reduced total cost of ownership during the lifecycle of the broadband network deployment. Institutions participating in all of the sector-wide investment schemes have agreed on open and competitive access to communications infrastructure funded by development partners. The investment package planned for the ICT sector is presented

### Table 3.17: Proposed Investment Plan for Sierra Leone ICT Sector

| ICT Sub-Category | Project | Donor | Status | Est'd Cost (USD, Mn) |
|---|---|---|---|---|
| **International Connectivity** | Connection to ACE Broadband fiber optic cable | WB | Secured | $25,00 |
| **National Connectivity** | Establish high speed GOSL Virtual Private Network | WB | Secured | $1,70 |
| | National Internet Exchange Point (IXP) | | | |
| | National Emergency Communications network | | | |
| | Metropolitan Wide Area Network fibre-optic | EIDB | In Prep | $29,00 |
| **Enabling Env't for Connectivity** | Commercialize SierrraTel | WB | Secured | $2,90 |
| | Liberalization of intenational gateway | | | |
| | Prepare for PSP in SALCAB | | | |
| | Project Implementation | | | $1,30 |
| **Enabling Env't for E-Applications** | Technical, market studies & business plans | IDB | Secured | $0,35 |
| | Project Implementation & Capacity Building | IDB | Secured | $1,30 |
| **Design & Deploy Terrestrial Backbone** | Design & Installation of 610 km. fibre optic cable across SL and connecting across borders to Guinea and Liberia | IDB* | Secured | $15,25 |
| **Extend Backbone Phase 2** | Install + 246 km. cable along terrestrial interior ring including drop & insert points | China HUAWEI | In Prep | $15,00 |
| **Extend Backbone phase 3** | Extend backbone along 15 spokes to reach mining sites, district HQs, tourism & Education sites | | | $12,80 |
| **Solar Electricity Generation** | Establish last mile WiMAX Access Links | IDB | Secured | $1,61 |
| **Operations and Maintenance** | Provision to launch sustainability | IDB | Secured | $1,00 |
| | | | | **$107,21** |

*Project Costs pertain to the Sierra Leone portion of a cross-regional project

8 Islamic Development Bank is the lead development partner to GOSL on this initiative
9 "Preliminary Feasibility Study for Terrestrial Fibre Optic Backbone Route and Implementation Plan for Sierra Leone," MOIC, March 2011, Page 15.

in Table 3.17 below.

### IMPLEMENTATION ARRANGEMENTS AND TIMELINE

This package of investments will get underway during 2011 with completion of the landing station expected in 2012. The Metropolitan wide area network and phases one and two of the terrestrial backbone will be implemented through 2015 and the projects are expected to pass the breakeven point between 2016 and 2023. The timing of phase three is dependent upon financing being raised and the involvement of mining companies and/or initiative by private sector communications companies to take the initiative to build off of the initial public investment in the terrestrial backbone. These investment projects are being supervised by a project implementation unit in MOIC.

### OPTIONAL INFRASTRUCTURE INVESTMENT PACKAGE FOR ICT GROWTH

Table 3.14 identifies that power sector investments are optional to release growth from the ICT sector. Chapter two and the paragraphs above have explained that Sierra Leone will proceed on the basis of using solar energy to power rural WiMAX stations for service deliver to the last mile. At the same time, it is clear that the country would able to reduce the cost of internet service even further if it were able to piggy back the installation of fibre optic cable onto power lines pertaining to an expanded national grid.

For this reason, more rapid expansion of Sierra Leone's power distribution network would offer incremental benefit to the ICT sector. The relevant investment for this IIP-O component pertains to the estimated $140 million earmarked for expansion of the national electricity grid.

**Table 3.18: IIP Base and Option Cost Estimate and Financing Plan for ICT Sector**

| Sector | Project Category | ICT | Total Cost Estimate | Financing Targets | | | Financing Secured | | | GAP |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Public | Dev't Partner | Private | Public | Dev't Partner | Private | ALL |
| **ICT** | Total Package | Base | $107.21 | | $94.41 | $12.80 | $0.00 | $94.41 | $0.00 | $12.80 |
| **Power** | Expansion of Domestic Grid | Option | $140,00 | $0,00 | $140,00 | $0,00 | $0,00 | $0,00 | $0,00 | $140,00 |
| **TOTAL Cost Estimate, Financing Plan and Funding Gap:** | | | $247.21 | $0.00 | $234.41 | $12.80 | $0.00 | $94.41 | $0.00 | $152.80 |

### CONSOLIDATED COST AND FINANCING ESTIMATES FOR ICT IIP

The assumption with respect to financing the build-out of the terrestrial grid is that if GOSL finances the first two phases of penetration into the interior, then the private sector will likely assume the cost of financing the third phase, estimated to cost $12.8 million. This would plausibly be sponsored by individual mining companies and also through the initiative of the incumbent mobile operators taking the opportunity to expand their footprint in the internet sector.

# 5. Scenario 4 - Infrastructure investment package for mining cluster growth scenario

Sierra Leone, Guinea and Liberia all possess several large scale mineral clusters located in their respective interior domain or which hug or cross each others' borders. Viewed in aggregate, these offer huge potential for greater development of the mining sector in the sub-region. Each individual mining site will have individual requirements for substantial infrastructure investment to be fully self-sufficient. Such requirements could be addressed on a stand-alone basis whereby infrastructure investment is sponsored by the respective private mining companies, perpetuating the enclave nature of mineral sector development in the three countries. A compelling alternative approach presented in Chapter Two is to take a "corridor" or mineral-infrastructure cluster approach to developing the sub-region's mineral reserves and use them as catalyst to launch a longer term downstream path to install multi-use infrastructure and proceed towards industrialization in the sub-region. The latter development path would require greater public sector involvement in the infrastructure planning and investment needed to serve the mining industry but it would serve to make the environment for investment in transformation industry more attractive to investors. Under this scenario, infrastructure would be up-sized to cater both to mining activities and to serve multiple additional users, thereby removing mining areas from their relative isolation and unlocking greater overall economic potential for the sub-region.

This Scenario presents the components of infrastructure that would serve the latter need. Different from the other three growth scenarios, this one does not currently represent a government-sponsored mineral sector investment plan. It is, instead, an alternative regional development approach to releasing the growth potential from vast mineral resources which occur across three members states of the Mano River Union. In this regard, the present scenario is largely illustrative at present and serves to advocate that GOSL and the Governments of Liberia and Guinea consider adopting an integrated approach to development of mining and industrialization in the sub-region, including the investment in large scale infrastructure that will serve this purpose. Because

of the preliminary nature of this development strategy, the categories of relevant infrastructure are presented conceptually herein but the defined investment projects that would be included in a base case IIP are not yet included as these would best follow from a regionally sanctioned corridor development initiative further refined and defined by the sponsoring countries themselves.

As such they appear as "To be Confirmed" components in Table 3.19 below. Nonetheless, this scenario serves to identify the relevant categories of infrastructure that would serve the spatial development needs of the mining industry within sub-regional corridors. These would be supplemented by complementary upstream measures to enhance the regional investment climate in mining and mineral transformation explored in section 3.5 which follows. Table 3.20 presents the recommended base and optional infrastructure investment plans that would release greater growth from the sub-region's extensive mineral resource sector.

## BASE IIP TO FACILITATE MINERAL TRANSPORT BY RIVER-BASED TRANSPORT

River transport has been identified as a plausible mode of moving cargo in Sierra Leone under both the cash and food crop development scenarios because it would offer a lower cost form of transport than by road. This would be equally true of the mining sector, especially if a barge transport system could be developed along river systems that are located in proximity to bulk mineral extraction sites. This should be considered further by regional governments, particularly if the cost savings are very great and if trans-boundary river systems could offer benefit to more than one country.

## BASE IIP FOR RAIL TRANSPORT AND BULK MINERAL PORTS FOR MINERAL SECTOR GROWTH

Rail transport and port facilities are both relevant types of infrastructure for the mineral sector, with port facilities being essential and rail transport highly attractive if economically justified. Because both are "to be confirmed" at this stage and it helps to look at the inter-modal connectivity which these offer together, they are described together in this section. Figure 3.5 designates plausible mining cluster zones by purple ovals based upon the WAMSSA analysis presented in chapter two. These are approximate and are juxtaposed against the regional road map diagram presented earlier, to show how they are situated with respect to the region's current roads network.

The red symbols identify ports which currently exist in all three countries, while the blue port and the blue railroad line running East-West across Guinea represent approximate depictions of infrastructure investments which Guinea is currently planning. The questions worth posing in this context relate to the optimal location of such infrastructure investment when considered from a corridor development perspective. The proposed rail line, if undertaken as a national investment, would be wholly national in character.

While it would connect to a 1,435 mm gauge Liberian rail line which travels from Buchanan port up to the Guinea border at Yekepa, this alternative would give Guinea an alternative of channeling all exports through its national territory and out through a national purpose-built port. It would, simultaneously, saddle Guinea with all of the investment cost and would

**Table 3.19: IIP Recommended for Regional Mining Sector Growth**

| Sector | Project Category | Mining |
|---|---|---|
| **River Transport** | River docks, wharves & dredging | To Be Confirmed |
| **Port** | Upgrade QE Mineral Port or Other | To Be Confirmed |
| **Rail Transport** | ECOWAS Rail Corridor | To Be Confirmed |
| **Road Transport** | Interior Trunk Roads & maintenance | Base |
| | Border Trunk Roads | Base |
| **Trade** | Cross-Border Trade Infrastructure | Base |
| **Power** | Generation | Base |
| | CLSG WAPP | Base |
| | Distribution build out of grid | Base |
| | Power Sector Reform & Cap Building | Base |
| **Area Development** | TIP: Bridge, Airport & New Freetown | Option |
| **ICT** | Phase 3 Terrestrial Expansion | Option |

**Figure 3.5: Current & Planned IIP in Ports and Rail to Support Mineral Clusters**

**Figure 3.6: Plausible Alternative Routing of a Cross-Regional Rail Line**


deny the opportunity to create multi-use potential by routing it in a cross-boundary manner to serve all three countries at once. Therefore, Figure 3.6 presents an alternate railroad routing—not because this is in planning phase-- but just to illustrate the contrast between a single-purpose national rail line versus a regional alternative that would cut across and integrate countries. If pursued on this basis, it would naturally be designed to carry other types of agricultural commodity cargo as well as people.

Presently the enclave mode of development is proceeding on the basis that private mining companies will invest in the port infrastructure that they require to service their needs. This map begs the question if that is the most economic approach or whether some regional cost savings and synergies might accrue if one or more deepwater ports in the sub-region were expended to cater to the expanded volumes that mineral development in the sub region can be expected to require.

## BASE IIP IN INTERIOR AND BORDER ROADS TO ENABLE MINERAL SECTOR GROWTH

Investment packages were described for interior and border road investment under cash crop and food crop scenarios respectively. Both of these are relevant infrastructure for the minerals sector and are especially needed to upgrade road quality so that it can cater to heavier loads implied by mineral transport. The only part of the roads sector investment portfolio that is not relevant to the mining sector is that pertaining to feeder roads.

## BASE IIP FOR POWER SUPPLY TO ENABLE MINERAL SECTOR GROWTH

The mining sector consumes a large volume of power and, ultimately, this source of demand will outstrip agricultural and household demand within Sierra Leone. In presenting the comprehensive GOSL plans for the power sector, the intention build a second phase of Bumbuna Hydro Power generating plant was identified and this would be highly beneficial to supporting development of the region's mining potential. Because this will be accompanied by investment in transmission across the region and enable participation in West Africa's energy market, this investment would be to the benefit of the entire sub-region as it could connect into the regional grid. The totality of GOSL's investment plan in the power sector is considered relevant to the mineral sector development scenario.

## OPTIONAL INVESTMENT PACKAGE (IIP) FOR FREETOWN HUB AREA DEVELOPMENT

At present there are poor connections between Lungi International Airport and Sierra Leone's principal business center, current Freetown, and travelers must endure a difficult leg of post-airplane transit by helicopter or ferry to arrive at their destination. Government considers this lack of accessibility as an important deterrent to investors that makes Sierra Leone a less attractive investment destination relative to other locations in the sub-region. Improving the investment climate is a major policy objective to deliver on GoSL's objective of encouraging private sector led growth and it is specifically relevant to attracting FDI into the mining sector. Accordingly, Government has developed a "Tripartite Investment Program" which represents one of the core elements in the Sierra Leone President's vision for infrastructure development in the country. The three components of the TIP will be:

1. To build a bridge that will connect the nation's capital, Freetown, situation on the peninsula on one side of the estuary with the country's only international airport at Lungi situated on the other side of the estuary;

2. To carry out a modernization and expansion program for the airport; and

3. To establish the nucleus of a new capital city adjacent to the airport.

The bridge is considered to be a key component of TIP and can be described as an 'umbilical cord' which will connect the other two components. It will enable safe and rapid access for visitor and commuters between Freetown and the airport and will replace the current inhospitable and unsafe mix of helicopter, boat and ferry transport that visitors and tourists are obliged to rely upon. The current capital is largely unplanned and is too congested to meet the

emerging demand for structured delivery of services and utilities. The current extensive spread of squatter settlements brings associated environmental risks and management problems which make it unpalatable for enhanced development of Sierra Leone as a tourism destination. Just as countries like Tanzania and Nigeria have separated their administrative capitals and commercial centers, so too would Sierra Leone like to embrace such a vision. The current airport is also inadequate in that it looks more like an airstrip rather than an international airport. It requires upgrading in order to offer visitors shuttle services, world class hotels and shopping facilities in and around the terminal buildings. GOSL views the three elements of the TIP project as inter-connected by nature and mutually reinforcing and therefore wishes to consider them as a single project to be embraced as a package. Stakeholders and potential investors are currently being consulted in order to explore the viability of realizing this infrastructure package with private participation on a concession basis. No cost estimates are yet available for this optional IIP but they will be developed in the coming months.

### OTHER OPTIONAL INFRASTRUCTURE FOR MINING CLUSTER GROWTH

The mining sector would benefit from ICT sector investment in the submarine fibre optic cable and landing station as well as the build out of a national terrestrial backbone to enable the delivery of broadband internet service into the interior. The incremental extension of the grid to mining centers and rural locations anticipated under Phase 3 of the ICT investment plan is the project investment package of particular relevance to the mining sector, and its cost is estimated at $12.8 million.

### CONSOLIDATED COST AND FINANCING ESTIMATES FOR MINING CLUSTER IIP

**Table 3.20: IIP Base and Option Cost Estimate and Financing Plan for Mineral Sector**

| Sector | Project Category | Mining | Total Cost Estimate | Financing Targets | | | Financing Secured | | | GAP |
|---|---|---|---|---|---|---|---|---|---|---|
| **River Transport** | River docks, wharves & dredging | To Be Confirmed | N/A | | | | | | | |
| **Port** | Upgrade QE Mineral Port or Other | To Be Confirmed | N/A | | | | | | | |
| **Rail Transport** | ECOWAS Rail Corridor | To Be Confirmed | N/A | | | | | | | |
| **Road Transport** | Interior Trunk Roads & maintenance | Base | $808,49 | $330,40 | $478,09 | $0,00 | $330,40 | $122,06 | $0,00 | $356,04 |
| | Border Trunk Roads | Base | $5,50 | $0,00 | $5,50 | $0,00 | $0,00 | $0,00 | $0,00 | $5,50 |
| **Trade** | Cross-Border Trade Infrastructure | Base | $34,00 | $0,00 | $34,00 | $0,00 | $0,00 | $0,00 | $0,00 | $34,00 |
| **Power** | Generation | Base | $49,00 | $0,00 | $0,00 | $49,00 | $0,00 | $0,00 | $49,00 | $0,00 |
| | CLSG WAPP | Base | $479,50 | $0,00 | $479,50 | $0,00 | $0,00 | $479,50 | $0,00 | $0,00 |
| | Distribution build out of grid | Base | $140,00 | $0,00 | $140,00 | $0,00 | $0,00 | $0,00 | $0,00 | $140,00 |
| | Power Sector Reform & Cap Building | Base | $40,00 | $0,00 | $40,00 | $0,00 | $0,00 | $0,00 | $0,00 | $40,00 |
| **Area Development** | TIP: Bridge, Airport & New Freetown | Option | N/A | | | | | | | |
| **ICT** | Phase 3 Terrestrial Expansion | Option | $12,80 | $0,00 | $0,00 | $12,80 | $0,00 | $0,00 | $0,00 | $12,80 |
| | **TOTAL Cost Estimate, Financing Plan and Funding Gap:** | | $1 569,29 | $330,40 | $1 177,09 | $61,80 | $330,40 | $601,56 | $49,00 | $588,34 |

# 6. Recommended Measures to Accompany Infrastructure Investment

### ACCOMPANYING MEASURES FOR THE ROAD TRANSPORT SECTOR

#### WEIGHT STANDARDS, AXLE-LOAD WEIGHING , REGULATION AND ENFORCEMENT

Sierra Leone increasingly recognizes that excess weight, especially by cargo-bearing truck traffic, causes faster deterioration of roads leading to higher maintenance and refurbishment costs. Consultants estimated in 2010 that chronic vehicle overloading could double the cost to Sierra Leone of maintaining its roads in the future.[10] In this regard, efforts were initiated during 2010 to review and update Sierra Leone's axle-load regulations and develop an axle-load control policy in line with ECOWAS policy. Meanwhile, ECOWAS' own standards in this regard have been evolving. Participants from SLRTA and SLRA attended an August, 2010 meeting on the Harmonization of Axle Load Policy for ECOWAS member states, under the Regional Programme for Transport Facilitation in West Africa. During this workshop, it was agreed that various ECOWAS protocols adopted in the past (such

10 Sierra Leone: Preparation of a Vehicle Overload Control Policy and Action Plan, Final Report to SLRA, Louis Berger, Nov. 2010.

as Convention A/P2/5/82 in 1982, Decision C/DEC/7/7/91 in 1991, Resolution C/RES.5/5/90 in 1990) were sometimes vague and generally not implemented. Consequently, participants agreed that Regulation No.14/2005/CM/UEMOA of UEMOA should be adopted as the applicable standard for the entire ECOWAS economic community. To that end, Regional Ministers of Infrastructure, Transport and Energy have endorsed the provisions of a draft Supplementary Act stipulating the axle load standards for heavy duty goods transport vehicles plying public roads in ECOWAS member states and this is due for consideration by ECOWAS' Council of Ministers who will then recommend it for adoption by regional leaders. The Supplementary Act will include an implementation road-map and ECOWAS member states will have until 2014 to come into full compliance with the new regulations. ECOWAS prescribes complementary measures to monitor and control vehicle weights through the use of fixed and mobile weighbridges and the imposition of sanctions such as fines and the obligation to offload excess loads for vehicles which do not respect imposed weight limits.

Meanwhile, the SLRTA has moved ahead to incorporate the proposed regional axle load and traffic control regulations into national policy and this has been presented to Parliament for approval. The adoption and enforcement thereof is deemed critical to securing downstream development partner support for investment in the core road network. Six mobile weigh-bridges were procured during 2010 and training was provided to SLRA staff in how it can be used. A stakeholder workshop was held with sector participants and large cargo transporters to begin sensitizing road users to the ECOWAS axle weight standards. However, consultants fear that transporters are dismissive of the need for change and may assume the new policy to be a temporary annoyance that will fade with time. Accordingly, Sierra Leone was advised to make further investment in the installation of fixed weigh-bridge facilities at strategic border and interior locations to come more fully into compliance with ECOWAS standards. Because such investments were not included in the NRS investment plan, provision for these within the present report is included in the investment package profiled for Scenario two. Other measures still required are to publish a schedule of fines within Sierra Leone legislation, establish an institutional mechanism for enforcement and repeat initial communication efforts to sensitize stakeholders in the transport sector to the new standards and the intention towards enforcement.

Sierra Leone must now take the difficult next steps to deliver bona fide enforcement of vehicle weight regulations while avoiding the creation of a new window open to corruption and abuse. This is a challenging change management process and is one that must effect behavior change not just in Sierra Leone but by the entire cargo trucking community in West Africa. In effect, vehicle overloading is a generalized habit in the region which has effectively transferred the private cost of excess wear and tear on the region's road network to a public cost of road upkeep borne by member states. None of the ECOWAS states can truly afford this cost, but in making the adjustment there could be a one-time generalized increase in prices as the charge for transported goods, ceteris paribus, adjusts to absorb its true economic transport cost. There will certainly be outcries and negative publicity generated by "losers" from the new policy and this explains why a public information campaign is a critical tool for government which should not be set aside. In sum, enforcement of the new order requires a determined, collective effort by member states and Sierra Leone will be more successful if other states move ahead with enforcement in like manner.

## CLARIFY ROLES, RESPONSIBILITIES AND FINANCING FOR PUBLIC SECTOR PARTICIPANTS

There is a degree of overlap between the roles of SLRTA and that of SLRA with respect to responsibility for promulgating the vehicle overloading control policy. While SLRA has responsibility to "propose vehicle weight limits and ensure their control," SLRTA is concerned with enforcement of national transport laws and the control of traffic. Clarity on the division of labor and budget allocations are clearly needed if Sierra Leone is to move forward effectively with an enforcement mechanism for vehicle overloading control. Likewise, while there is clarity now that responsibility for maintenance of feeder roads has been devolved to local level authorities, no financial mechanism has yet been set in place to ensure that districts are able to discharge their responsibilities. This is a gap which must be addressed if the heavy investment in feeder roads is to be sustained.

## MEASURES TO PROMOTE JOB CREATION AND LOCAL PRIVATE PARTICIPATION

Road construction and rehabilitation projects can generate a good number of jobs if labor intensive construction technologies are favored and foreign contractors are encouraged through bidding processes to make use of them. SLRA has, indeed, adopted the strategy of generating jobs in this manner and is taking further steps to encourage the development of an indigenous roads contracting sector. They are doing this by contracting out road condition surveys, feasibility studies and designs, supervision and implementation of works and encouraging association between local firms and foreign contractors. At the same time, it is important to ensure that "twinning" in order to win contracts is accompanied by sufficient competition in the local industry to avoid a situation where few local partners succeed in "capturing" the business by preferential association with foreign contractors, thereby driving up the costs to the country. Additional ways of developing local private sector capability are useful and these can be provided through linkages with SME development projects, association with the Youth Commission or the like. Included would be measures to upgrade bidding skills, strengthen industry associations and improve

access to credit. With respect to the credit issue, local firms contracted to undertake work on feeder roads have exhibited difficulties in arranging adequate working capital to deliver works. Where SLRA has contracted out works being financed under secure grant commitments, perhaps the Authority could position itself as guarantor vis-à-vis local financial institutions to enable market-based financing transactions to take place and develop trust and skill between local lenders and borrowers.

### MEASURES TO PROMOTE CAPACITY OF LOCAL LEVEL PUBLIC SECTOR AUTHORITIES

The decision to delegate authority for feeder and local roads to district councils likely assumes that the communities which benefit from local roads have an incentive to see them maintained. At the same time, there is a capacity gap at local level both in terms of engineering and management capacity and possibly with respect to understanding by community members regarding their responsibilities as road beneficiaries. Regular communications in the rural milieu could help. In addition, SLRA is planning to assign District Engineers to help upgrade the skills of council level staff to assume their responsibilities.

District Engineers are to be posted and supported with mobility to enable frequent contact with local councils. While they will not provide engineering services to local councils, they will aim to establish local level capacity in:

- Programming (planning of road works over different time horizons)
- Implementation (TOR, tendering, evaluation, contracting)
- Supervision (contract management and supervision.)

This is indeed essential to ensure that investments in the feeder road network can be adequately sustained by local authorities in the future.

## ACCOMPANYING MEASURES FOR THE POWER SECTOR

The paragraphs which follow propose policy considerations and reform measures which, together with the investment package constitute a recommended action plan for Sierra Leone's power sector.

### BALANCE PRODUCTION VS. IMPORTS TO MINIMIZE ELECTRICITY COSTS

Sierra Leone's power sector plans depict a high degree of emphasis on tapping the domestic hydro-power potential of the nation. This reflects a healthy ambition to deliver on the promise of private sector led growth in agro-industry and the mining sectors which are expected to drive a substantial rise in demand.[11] At the same time, it is recommended that Sierra Leone prioritize the importance of achieving electricity cost reductions, possibly elevating this objective over origin of supply, since availability of lower cost electricity is critical to economic growth. While Sierra Leone's plans reflect secure knowledge of its domestic resource base, dynamic change is going on in neighboring countries and GOSL will want to stay attuned to potential changes in supply available through the CSLG connection into the regional grid. Power generation projects are under preparation in Guinea and Liberia and were it to become the case that new or refurbished generating plants come on stream earlier than expected, planners might want to defer some projects and emphasize regional energy trade to a greater degree or for a longer period to meet some of the national industrial development goals. This is not to call into question the merit of planned generation infrastructure investment, but to highlight that sequencing could help extract lower costs and the highest value to the Sierra Leone economy because of the opportunity to participate in regional energy trade.

A key question for the authorities to contemplate in this regard is the cost competitiveness of domestically generated electricity as compared to that which could be obtained by importing from the regional grid. Chapter One revealed that Sierra Leone has an estimated hydro-power potential of 1000 MW and while this is a substantial endowment, it is half of the assessed potential in Liberia (2000 MW) and one sixth of that assessed to exist within Guinea (6000 MW). A key economic attribute of the power sector is the fact that savings can be achieved when generation investments are made on a larger scale. In a normalized situation where generation costs contribute approximately 70% of the total cost of power supply, small savings in generation can deliver significant cost savings down the line. This gives national planners more options with respect to tariff and national development policy options. The important point here is that fiscal space is best created in circumstances where least cost generating solutions are tapped first. From a regional perspective, then, it might make most sense to tap Guinea hydro-potential first in line, then that of Liberia at a second stage, before bringing a sizeable portion of Sierra Leone's potential on stream. This scenario would naturally behoove Sierra Leone to stay fully informed about the comparative costs of downstream domestic generation versus that which will be available through the grid. Planners will nonetheless also want to satisfy

### Box 3.7: Keeping an Eye on Unit Costs of Generated Power

Sierra Leone has every interest in driving down the weighted average cost of generated power by blending new, cheaper sources of supply with existing, higher cost sources.

- Current cost of thermal supply: 30 to 40 ¢ / KWh
- Current cost of Bumbuna supply: 15 ¢ / KWh
- Prospective cost of ABSL supply: 20 ¢ / KWh
- Plausible cost of Guinea supply: 1 to 2 ¢ / KWh
- Forecast cost of WAPP Supply: 3.8 ¢ / KWh

11 It remains to be verified whether this also reflects a degree of priority on "security" of supply, preference for national supply and if anything in the legislation places limits on the degree of reliance to imported supply.

themselves with a back-up plan to ensure adequate stability of supply to cater to growing demand, so detailed preparation work for downstream hydro-projects should move ahead.

## UNBUNDLE THE POWER SECTOR AND BUILD CAPACITY OF SECTOR INSTITUTIONS

The power sector investment package identifies that Sierra Leone recognizes it faces a significant amount of sector management work to do to accompany physical infrastructure investment. This will include legislative and regulatory change flowing from the new Energy Sector Policy along with significant investments in the institutional landscape. Government has committed to unbundling the vertically integrated industry structure to separate generation, transmission and distribution functions, thereby opening the sector to greater competition and creating conditions for greater participation by private operators. For competition at both wholesale and retail levels to be effective, sector reform must be accompanied by the establishment of a competent regulator-- what Sierra Leone has pre-designated to be the "Public Utility Regulatory Commission"-- for reasons described in the accompanying text-box. The fact that Sierra Leone intends to build a "hybrid" power sector including private independent power producers adds complexity and raises the importance of a regulator that is fully independent of government and vested with substantial technical competence. In some respects the relatively late introduction of a regulator in Sierra Leone's power sector is an advantage because it should enable a degree of harmonization between PURC and the ECOWAS Region Electricity Regulatory Authority (ERERA).

### Box 3.8: Role of Regulator in Preventing Market Failure

Market failure occurs where markets do not produce economically efficient outcomes. This is common in the utility sector. Utility services characteristically have economies of scale and large entry and exit costs and, as a result, many utility services are natural monopolies. This means that one facility (for example a single electricity generating plant) can supply a market at a lower cost than could two or more. Therefore new entrants cannot undercut the current service provider on price. The lack of competition can lead to symptoms such as suppliers providing poor services, charging high prices, using obsolete technology and not maintaining existing infrastructure or operating systems. In these circumstances regulation can benefit the community by reproducing benefits provided elsewhere by competition and choice. An important condition for economic gain is that the cost of regulation does not outweigh its benefits.

The reform process will likewise require restoring the financial viability of the sector incumbent operator, the National Power Authority. Like many state-owned enterprises, NPA has suffered a myriad of economic management ills that must be rectified. These include problems outside their control such as slow-to-adjust tariffs that have failed to recover full operating and capital costs plus escalating input price of fuel. They also include internal problems such as over-staffing, non-commercial behavior (tolerating non-payment by customer segments), poor billing and collections procedures and high system losses due to physical deterioration of assets and electricity theft. Many of these problems are in the process of being addressed as through the introduction of metering and upgraded use of information technology. While NPA is slated for privatization by the NPC, the options are naturally constrained by the virtual insolvency of the enterprise and under any ownership scenario it is quite important that the enterprise be restored to financial health. This reinforces the need to generate fiscal space to enable NPA recovery as discussed further under tariff matters below.

Meanwhile, there remain other practical tasks to be undertaken such as the legal establishment of a National Transmission Company, the transfer of assets from Bumbuna Hydro-Power station and NPA to the latter and the related accounting tasks of separating NTC assets from the NPA balance sheet and vesting these in the NTC. This accounting task will enable proper accounting for transmission activities so that regulators can properly measure and attribute costs to the transmission function for determination of a proper transmission tariff. This step in the unbundling process is equally important as a pre-condition of Sierra Leone's entry into WAPP and the regional energy market. Measures to build capacity for Sierra Leone's rural electrification program are dealt with in a separate paragraph below.

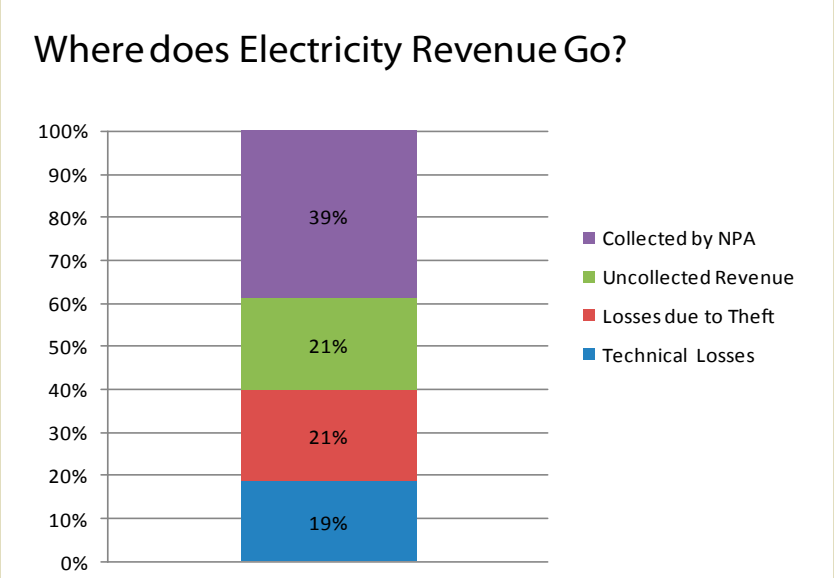
## CONSIDER HOW COST RECOVERY, TARIFFS AND FISCAL POLICY EXERT INFLUENCE

Costs, tariffs and the fiscal orientation of sector policies all have a bearing on sector performance, both of power sector enterprises and of the economy as a whole. While each financial lever clearly intersects with the others, the elements do not necessarily flow one from the other. They are generally managed, set or influenced by different parties, which explains the importance of a neutral regulator. Though over-simplified, one can think of operators striving to control and recover costs to earn a return, regulators striving to set fair prices to all parties and ministries seeking to set policy that serve constituents and stimulates the economy.

The pressures and interests of each party can work in synchrony or they can work at odds to each other and to the detriment of sector performance. A stylized but extreme example would be one where policy aims to expand demand by setting tariffs catering to affordability by the poor without providing the operator an explicit subsidy to fund the policy goal. This would set off an unhealthy cycle of performance. There is no one single cause of the current state of decay in Sierra Leone's power sector, but since the country's intentions are to turn a new leaf and set ground rules that will sustain healthy conditions for competition, private sector entry and viable financial performance in the future, this section aims to sensitize policy makers to different perspectives and considerations that should be borne in mind as sector reforms carry forward. It does not strive to dictate solutions, but to highlight sensible approaches and potential pitfalls.

The PIDA study identifies that, across the African continent, financial sustainability has been lacking or

**Figure 3.7: Revenue Leakage in SL Power Sector**




**Box 3.9: Principles in Setting Utility Tariffs**

The regulator should ensure adherence to the following generally accepted principles for utility tariffs:

- Tariffs should be based on full recovery of costs to enable financial sustainability and allow the regulated companies to raise capital for investment, subject to demonstration that they are operating in accordance with industry norms.
- The tariff structure should reflect both the fixed and variable cost structure of the utility service and the time of consumption.
- Tariff for a specific service should be based on the cost of providing that service. Thus the regulators should ensure that appropriate cost-of-service (COS) studies are conducted before tariffs are designed.
- Any subsidies deemed necessary should be provided directly to the service provider or the consumer rather than through the tariff structure.
- Procedures should be in place to allow for regular adjustment of tariffs to reflect changes in un-controllable costs, such as an automatic annual adjustment program. This needs to be designed in an appropriate manner.

absent in the power sector and this is the foremost impediment to realizing greater investment in the sector. Consequently, PIDA recommends renewed emphasis on measures to restore full cost recovery within the power sector. National operators, such as NPA, have a role to play in this process by introducing greater commercial discipline, enforcing payment requirements and introducing consequences for non-payment (including measures other than simply shutting off supply) to customers. At the same time, they need sufficient working capital to restore efficiency into operations and to overcome the accumulated effect of neglected maintenance. On that front, they must be supported with two essential complementary measures, notably cost recovering tariffs plus establishment of protected reserves to provide for the routine costs of maintenance. All of these are relevant to the Sierra Leone power sector. Figure 3.7 depicts the leakage which currently occurs in Sierra Leone's electricity sector, revealing that only about 39% of the value of electricity is presently realized as NPA revenue with the rest being siphoned off by theft, non-revenue sales and technical losses which would be lower had maintenance been adequate to preserve the system. Insufficient revenue and depleted working capital explains why the overhead distribution network in one part of Freetown has been cannibalized for spare parts to repair the network in another part of town, highlighting the extreme consequences that can occur and that must be prevented from recurring in the future.

Sierra Leone has undertaken tariff studies in the past and these will need to be updated again as the effects of sector restructuring, competition, new investment and participation in the regional energy market all bear influence on the cost of electricity supply in Sierra Leone. Sierra Leone's distribution companies will eventually face alternate prices from two sources of supply—those from the WAPP grid or those from wholly domestic sources. Tariffs for the former will be set by ERERA and the latter by the PURC. There are various methodologies for setting tariffs, including cost of service, rate of return and price cap tariff systems to mention a few. No method is perfect and each presents advantages and disadvantages. However, rather than focus on the technical alternatives, the emphasis here is on the fundamental importance that policy and legislation support the functions of an independent regulator authorized to set tariffs that enable an 'efficient' enterprise to fully recover long term costs. 'Full' recovery should allow for recovery of long term marginal costs, including operating costs, maintenance costs, capital investment costs, financing costs and a provision for profit as reinforced in the accompanying text-box. Profit is essential for sector sustainability and to enable financing to be raised for future capital investment. The irony in the case of Sierra Leone is that its national power sector is currently so inefficient that costs should be expected to decline rather than rise, particularly if the country promotes greater competition in generation and achieves this by witnessing benchmark prices available in the West African energy market. A problem which regulators will face in setting tariffs in Sierra Leone's recovering power sector is to identify that portion of costs which is justified and attributable into the tariff structure versus that portion which reflects an excess cost of an inefficient operator which the customer base should not bear. This dilemma explains why restoration of NPA to functional efficiency and viability is essential and must be accomplished as quickly as possible. Over time, competition will make the discovery of efficient cost-basis for pricing an easier task.

Before leaving this topic, a discussion of subsidy policy is in order. Subsidy schemes are often problematic as experience shows they rarely ever decline and go away. Instead, consumers tend to become dependent upon subsidized consumption, politicians

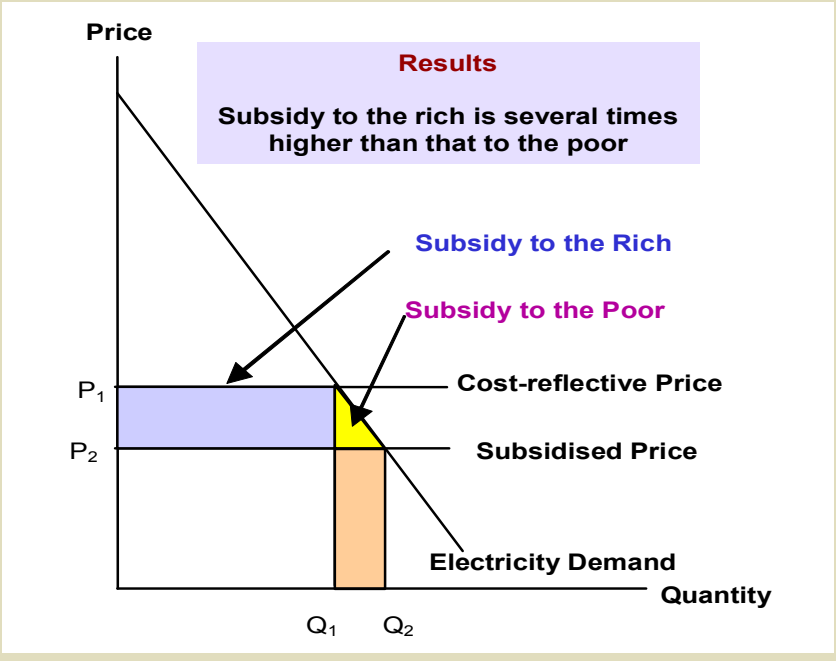
are reluctant to wean their constituencies and economies lose touch with the real scarcity value of goods and services. Yet, countries with impoverished populations often resort to providing a blanket subsidy to utility customers, thinking that a majority of the consumers cannot afford to pay a cost-reflective price. Sierra Leone should contemplate whether this observation is in any way applicable or relevant to the history of their national power industry. The consequences of subsidized electricity pricing can be illustrated in Figure 3.8. By charging a subsidized price (P2) much below the cost-reflective price (P1) to all the customers, the utility may end up giving a subsidy to the rich (blue rectangle) several times higher than that to the poor (yellow triangle). It is important that the policy planners and regulatory staff realize that low tariffs applied to all consumers regardless of income category are actually disguised subsidies to wealthier households. As such, they are therefore contradictory to a pro-poor growth strategy.

On the other hand, it could be argued that without any type of subsidy, the expansion of the power grid into Sierra Leone's poor rural interior may not occur and reluctance by private investors to enter the distribution function will be a foregone conclusion. Given these observations, it is best for a nation to adopt a specific set of subsidy policies in advance of embracing PSP so as to make conscious decisions about when to make use of subsidies, how to design them and when to phase them out. In Sierra Leone's case, it is recommended that subsidies should be contemplated only in association with extension of service to rural households and not to agro-industry, small and medium enterprise, institutions whose current alternative is generator use or any other new non-household customers up country. The following paragraph takes up the issue of delivering rural electrification on a sustainable basis.

## SUSTAINABLE APPROACHES TO DELIVERING RURAL ELECTRIFICATION

Government's plans call for the publication of a Rural Electrification strategy, the establishment of a Fund and creation of a dedicated Agency to lead the implementation of this dimension of the investment program. PIDA has identified that countries with dedicated rural electrification funds can achieve higher rates of electrification than those without. Also, those with clear planning criteria have been more successful. And, those with a centralized approach to grid extension have been more successful than cases where the RE Agency has attempted to recruit multiple utilities into participation in the electrification campaign. In this context, Sierra Leone's first initiative at implementing a three year action plan seems warranted.

**Figure 3.8: Impact of Electricity Tariff Subsidy**




## MEASURES TO ENHANCE PSP WITHIN THE POWER SECTOR

Private sector participation in the power sector can bring many benefits and GOSL is wise to embrace this objective. This section has identified that PSP can permeate all aspects of sector performance, whether it enters into generation, transmission or distribution functions. Consequently, PSP considerations must permeate all aspects of sector management, regulation and the sector Action Plan. While operational efficiency and the provision of financing are two advantages frequently cited, capital efficiency is another key benefit which should be kept in mind. Historically, the private sector has done a better job of considering technology alternatives before settling upon a given solution requiring substantial capital investment. For this reason, it is important that governments not meddle too much in the fundamental capital planning choices by private investors. In this regard, a word of caution is offered. Governments often develop an incentive package to attract entry by private investors into PPP or IPP arrangements. There are some "dos and don'ts" to be considered. One major difference between public and private investment in infrastructure is that governments can often gain concessionary or partial grant terms from development partners and can usually achieve cheaper total financing costs than the private sector would manage on their own. It is legitimate and appropriate to pass these financing savings on to private parties under PPP arrangements as long as provisions are made to pass the cost savings on to ultimate customer beneficiaries. On the other hand, GOSL should be wary about extending that generosity to the use of government financial guarantees towards third party financiers and should use the latter incentive sparingly and with caution.

A second factor to bear in mind is that government incurs risk when it enters "take or pay" power purchase agreements with private power producers. In such arrangements, it is important that distribution capacity and demand keep up in order not to incur the risk of having to purchase energy which cannot be used. This risk is significantly mitigated by Sierra Leone's entry into WAPP as there is an alternate outlet into the regional grid should the pace of domestic development result in mismatch between demand and supply. The points to emphasize are two-fold: on one hand, Sierra Leone can feature its participation in WAPP as a security advantage when marketing its IPP investment opportunities to private investors. On the other hand, recourse as an exporter brings home the importance of active (not passive) participation in all of the terms that accompany the institutional set-up of CLSG/WAPP and GOSL is encouraged to take an active part in the terms for establishment of the CLSG Special Purpose Vehicle.

## ACCOMPANYING MEASURES FOR THE ICT SECTOR

### RECOMMENDED ICT ACTION PLAN TO RE-LIBERALIZE INTERNATIONAL GATEWAY

As was noted in chapters one and two, Sierra Leone has made tremendous strides in liberalizing the sector. However, the National Telecommunications Act requires amendment now in order to reverse the monopoly given to Sierra Tel over the International Gateway. In addition, it is recommended that measures to ensure the principle of "open access" are embedded in the legislation and the regulations that will be developed by NATCOM thereafter.

### UNDERTAKE MEASURES TO ENHANCE PSP IN ICT SECTOR

The IIP for the ICT sector identifies the fact that the infrastructure pertaining to the national landing station and the terrestrial backbone will be invested initially in SALCAB and thereafter opened to private sector participation through a privatization process. It is important that due care be exercised in structuring the offer of SALCAB shares to the private sector in order to avoid a situation whereby ownership could be concentrated between a few dominant interests. The PIDA reports have identified that duopolistic ownership structures in other national settings have been problematic, working against the principle of competitive open access and retarding a nation's ability to move quickly to embracing new generations of technology since that will only occur with full scale competition.

## ACCOMPANYING MEASURES TO RELEASE GROWTH FROM GLOBAL TRADE

Better roads and more affordable transport systems will have a highly beneficial impact on the domestic conditions for trade in global export crops, by increasing accessibility in rainy seasons and by improving the competitiveness of transit through the Sierra Leone interior to the port in Freetown.

These are necessary but insufficient conditions to unlock the growth potential from Sierra Leone's globally traded crops sub-sector. In addition, chapter two made the case that Sierra Leone could achieve higher economic returns from a variety of measures that expose producers and traders more effectively to conditions of global market demand, including price signals and incentives for quality improvements and other measures that serve to induce greater efficiency into value chains. This section formulates a series of related recommendations for Government to consider as it continues forward with implementation of the National Sustainable Agriculture Development Plan and the National Export Strategy striving for greater efficiency and competitiveness in agriculture.

### TRADE POLICY SHOULD BE ACCOMPANIED BY AGRICULTURAL TRADE POLICY

In the early nineties, Sierra Leone, like many other African countries opened up its economy to external competition through trade and exchange rate liberalization reforms and largely maintained a liberalized economy during and after the war. Since these reforms were initiated, Sierra Leone has not had a consistent approach to the development of trade and especially issues specific to agricultural trade. A draft Trade Policy was recently formulated for the implementation of government's PRSP 2. When fully adopted and implemented, this will provide a harmonized and coherent reference for trade development in Sierra Leone. The draft Trade Policy recognizes the opportunities and benefits of international trade offered by global initiatives such as the WTO framework for global trading, regional economic and trading programs under the umbrella of NEPAD, ECOWAS and the Mano River Union. Specifically, it will complement the EFTLS, the EPA being negotiated with the EU through ECOWAS and trade with the United States under AGOA.

Meanwhile, with Trade Policy still under development, Sierra Leone has no comprehensive agricultural trade policy and this represents an area of policy gap. Increasing competition on international and regional agricultural markets and current negotiations on agriculture within the World Trade Organization (WTO) make evident that Sierra Leone would benefit from developing a robust and efficient agricultural trade policy. International trade of agricultural commodities and food products has increased in the last decade as a result of widespread globalization. Global commodity trade and food issues are strongly affected by international standards and requirements. Exporters and producers the world over must now ensure that their products comply with norms and regulations in order to ensure product conformity in terms of quality, environmental and health standards. These norms and regulations differ according to the product and the country of export and import. Some regulations are based on international food standards; others are based on sanitary and phyto-sanitary

standards; others are based on grade, size, weight, packaging and labeling. Sierra Leone's agricultural trade policy should give recognition to the importance of these parameters for competitiveness in international agricultural trade and set the framework against which a comprehensive set of regulations covering agricultural exports and food products is updated. The content of these regulations is discussed under the legislation and regulation section below.

## LEGISLATION AND REGULATION OF AGRICULTURAL TRADE SHOULD BE UPDATED

The legal and regulatory framework for food and agriculture products in Sierra Leone is embodied in the legislation depicted in the accompanying text-box, much of which is outdated relative to current global trading practice in agricultural commodities.There is need to introduce WTO/SPS concepts and terminologies into the national legislation covering food and agricultural exports. There are conflicting provisions in the legislations regarding roles and responsibilities among public sector agencies involved in delivery of inspection services and there are often conflicts between officials of the Ministries of Health and Agriculture

### Box 3.10: Legal & Regulatory Framework for Ag Trade Requires Updating & Coherence

- The Agricultural Act 1946
- The Plant Pest (Inspection of Crops) Rules, 1946
- The Produce Inspection Rules, 1966 of the Agricultural Act (Cap 185)
- The Plant Phytosanitary Import Rules, 1974 of the Agricultural Act (Cap 185)
- The Plant Phytosanitary (Import Restriction) Notice, 1976
- The Public Health Ordinance (1960)
- National Environmental Health Policy (2004)

over phyto-sanitary inspections and issue of phyto-sanitary certificates. These duplications lead to higher costs, repeated steps within the trade facilitation chain and longer delays in achieving exports. The current framework is also weak on grading, certification schemes and standards for agricultural products. The Agriculture Act of 1946 provides a broad framework for the development of agriculture in Sierra Leone. The agricultural products highlighted are the traditional agricultural export products of cocoa, coffee, palm kernel, palm oil, ginger, piassava and forestry products. The Produce Inspection Rules, 1966 of the Agricultural Act (Cap 185) deals with the inspection, grading, transport, storage licensing requirements and export of these crops. Its provisions require consultations with the Ministry of Trade and Industry and are enforced by the Ministry of Agriculture, Forestry and Food Security. Neither legislation covers cashew and cassava based products which are relatively new export products. The Plant Phytosanitary Import Rules, 1974 of the Agricultural Act (Cap 185) and the Plant Phytosanitary (Import Restriction) Notice, 1976 are enforced solely by MAFFS and have the basic elements of administration of SPS Standards but both fall far short of current SPS regulations that can be applied to agricultural exports. The Plant Phytosanitary (Import Restriction) Notice of 1976 outlines the conditions under which 64 categories of plants and plant products can be imported into Sierra Leone. MAFFS issues phyto sanitary certificates for the export of palm oil under this Act.

Concurrently, the Public Health Ordinance (1960) is implemented by the Ministry of Health and Sanitation through its Environmental Health Division. The import, export and storage of food, cereals and canned food are regulated through this ordinance. Because it is outdated, its key provisions have been included in the National Environmental Health Policy (2004) which is the foundation for new environmental health legislation. The policy charges the MOHS with the responsibility for food safety and hygiene through inspections and issuance of food certificates, thereby introducing overlap with MAFFS in the inspections function. Certificates for the export of gari and palm oil, generally destined for regional trade, are issued under this policy. The Environmental Health Policy (2004) is relative weak on food safety control (focusing more on consumer protection and quality of locally produced foods) thus does a poor job of addressing the relationship between the national food safety control system and international trade. Consequently, its definitions, terminologies and concepts are not harmonized with those used by WTO/SPS and CAC. Similarly, Sierra Leone legislations covering SPS measures fall far short of modern requirements of the International Sanitary and Phytosanitary Measures (ISPMs) of the International Plant Protection Convention (IPPC) and the provisions of the Inter African Phyto-sanitary Council (IAPSC). Key deficiencies include:

- Right to inspection of vessels, aircraft and vehicles without warrant;
- Right to inspection and registration of facilities selling inputs and foreign plant products;
- Provisions for the destruction of any plant under supervision of the quarantine service;
- The regulation of packaging materials;
- Strengthening of plant quarantine regulations and enforcement measures.

The current regime is also weak on grading, certification schemes and standards for agricultural products.

Grading schemes do exist for traditional export products which have legislative cover but there is no scheme, for example, for cashew. Yet, agricultural products are increasingly subjected to market pressures for certification, designating them as "Organic" or "Fair Trade" and these may be voluntary or mandatory. Sierra Leone's regulations should be reviewed to make provisions for compulsory or voluntary compliance with Standards and Certification schemes. Taken as a whole, the legislations highlighted above are not robust with respect to international standards for food and agricultural products and their shortcomings may result in Sierra Leone's exports being non-competitive in international markets, subjected to non tariff barriers in destination countries, or in the extreme case, an outright ban. Updated

regulations should be prescribed within a legal framework and embody internationally accepted Standards and Phyto-Sanitary Standards, and should make adequate provision for the following measures:

- Inspection Systems
- Testing Capacity
- Certification and Standards
- Penalties for violations of Regulations and Standards.

Shortfalls in any of the measures described above may result in a rejection of the agricultural commodities at the destination, low commodity prices or both.

### INSTITUTIONAL CAPACITY FOR PRODUCT QUALITY SERVICES SHOULD BE UPGRADED

Complementary measures are needed on the institutional front to vest capacity within designated public sector organizations involved in delivering services required to efficiently manage a quality improvement scheme in the crops sector. At present, crop inspection facilities exist only at the Port of Freetown and at Lungi International Airport and, since the civil conflict, have been absent from customs buildings at border points around the country. Inspections are carried out by health inspectors who have skills gaps in food control measures. Testing facilities are also weak as the Ministry has no internationally accredited food or microbiological laboratory. Being competitive requires the ability to prove that products meet standards and this is most cost effective if provided locally. "Proof" is only accepted as such by the international community when it comes from a laboratory that is part of the global network of accredited testing and calibration laboratories that have been assessed and recognized as being competent for specific types of testing by the International Laboratory Accreditation Cooperation (ILAC) accreditation bodies. This, at the moment, is absent in Sierra Leone.

### MEASURES TO STIMULATE SUPPLY OF EXPORT FINANCE SHOULD BE CONSIDERED

There are thirteen licensed commercial banks operating in the country but these have extremely low penetration levels in the rural and agricultural milieu. Sierra Leone's financial institutions generally undertake traditional banking practices characterized by high interest rates and property collateral requirements for loans. There is a general reluctance by commercial banks to fund agricultural activities because of the prevalence of subsistence farming, high risks associated with crop failure due to rain fed agriculture and barriers to the use of agricultural land as collateral due to the "communal" land ownership issues in the provinces. Although some banks are adopting innovations such as group based lending, more should be done. An export credit guarantee scheme was instituted by the central bank in seventies in collaboration with the commercial banks to support the export sector. This scheme collapsed in the eighties and agricultural exporters have been affected since then by the unavailability of pre-financing facilities from domestic commercial banks.

There are plans by the central bank to revive the export credit guarantee scheme in collaboration with other partners. While this could help to stimulate the supply of export financing and thus remove barriers to sector entry by domestic traders, government should also consider how to make the land usage rights of rural smallholders a more viable and "bankable" asset. Some development partners might have instruments which would lend themselves to overcoming this obstacle. An example might be the "Development Credit Agreement" used by USAID as a facility which to provide back-up guarantees to financial institutions for circumstances of default, thereby leveraging and effecting a release of financing by front-line domestic financial institutions.

## ACCOMPANYING MEASURES TO RELEASE GROWTH FROM REGIONAL TRADE

### EVALUATE PHYSICAL ROAD NETWORK FROM A REGIONAL PERSPECTIVE

It is suggested that member states would find it a fruitful exercise to assemble a cross-disciplinary team of technical planners and invite them to examine the MRU region's current and planned physical road network. They would be charged with comparing the current situation to a more optimal situation taking into account respective national visions and development plans, not just in transport, but also in trade, industry, agriculture and mineral sector development. The team would identify linkages or lack thereof between national roads in respective countries; they would clarify and compare traffic flows across key and secondary arteries, identifying those which cater predominantly to the movement of goods and those which cater to the free movement of persons. Members would assess and compare the stock of investment plans underway in each country's mineral and agriculture sectors. They would then take note of road sector investment plans and would identify the approximate time frames against which regional road planning could converge and lead towards a more harmonious regional transport plan. Their fundamental responsibility would be to gain a broader regional perspective and infuse that back into their national planning institutions, including transport ministries, road planning and traffic safety agencies as well as ministries with a high degree of interdependence upon transport.

### DISCUSS ROAD SECTOR HARMONIZATION MEASURES TO ENABLE PSP

Eventually, MRU states may want to undertake large road transport projects on a regional scale, and, in this connection, Sierra Leone is encouraged to consider what it will take to elicit private sector participation in transport infrastructure. A plausible example might be the need for an expensive asphalt-concrete road catering to multiple users while also linking an

iron mine in Eastern Guinea to a port or smelter in Liberia or Sierra Leone. The private sector could become an important contributor in a variety of roles, whether as financier, construction agent or possibly toll road operator. Road transport will be perceived as high risk by the private sector unless measures are taken to ensure that private risk is mitigated and road project risks are assigned within PPP structures to the partner best able to manage them. Hence, for example, a private party will likely accept to manage risks largely under their own control, such as construction costs or project duration, whereas they are less likely to accept "demand" risk associated with road use. Failures have arisen when demand risk was evaluated on optimistic traffic estimates and assigned to the private sector. To prepare for the eventuality of enabling PSP, this must begin with harmonizing legislation between Governments or, in the case of ECOWAS, the confirmation that provisions of the Regional Traffic Facilitation Program are slated within national legislation and adhered to. Governments will need to decide which legislation (national or regional) applies to private parties and how they will coordinate to regulate road use. Toll levies are more competitive if regionally consistent and border controls can be a deterrent to road users if immigration and trade facilitation services are not dispatched efficiently.

## APPRAISE BENEFITS OF CORRIDOR DESIGNATION; IDENTIFY MANAGEMENT SCHEME

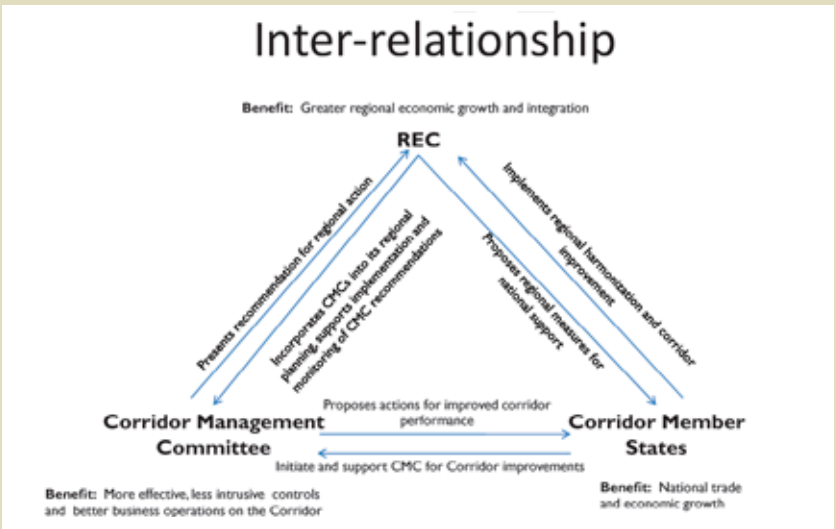
Chapter One identified that Sierra Leone has no designated North-South trade corridors registered within the ECOWAS Inter State Road Transport Convention and its national port currently has little legitimacy or recognition to potentially serve the needs of landlocked countries to the north. Meanwhile, the country has every interest to become a participant in servicing North-South trade flows and the authorities are encouraged to consider how they might benefit from designation of at least one Guinea-Sierra Leone trade corridor at a minimum. The idea is to get "on the map" and apply the Community's rules to integrate and gain recognition as a regional player. This is essential if truckers are to gain the opportunity to transport cargo in both directions, confident that if they travel north with goods, they will not have to return empty at higher cost. One idea might be to seek recognition of a link between Koindu in Sierra Leone and Guékédou in Guinea, thereby revitalizing a traditional trade corridor and regional market cluster that previously served all MRU countries. Although the current tendency might be to ship Guinean exports from East to West and out through Conakry, a shorter corridor to Sierra Leone's coast would present a lower cost alternative and that would undoubtedly appeal to the private sector. Alternatively, Sierra Leone might wish to connect into the designated trade corridor that connects Guinea with Mali, seeking recognition for an alternate North-South leg below Kankan. While it is plausible that this could be seen as a competitive threat by Guinea authorities, this might change if Sierra Leone were to share the costs, benefits and responsibilities of managing a regional Corridor Management Authority to encourage traffic on this inter-connect span of transport routes.

When considering key trade and transport corridors, PIDA has identified in its Africa-wide study that Corridor Management Authorities should be built up as inter-state institutions to take charge of corridor management, assume responsibility for maintenance, revenues from tolls, administration of weighbridges and road safety controls. The diagram below portrays the current institutional model for Corridor Management Organizations employed by UEMOA, involving corridor management committees plus member state representation and adherence to REC transport regulations. This is one of many examples where the UEMOA bloc is more advanced than non-UEMOA states within ECOWAS, but there is every reason for MRU states to consider this model in contemplating enhanced investment in a regional road network.[12]

## IDENTIFY COMMON MEASURES TO ENHANCE TRADE FACILITATION

The ECOWAS Trade Liberalization Scheme establishes a free trade area with rules governing the free movement of people, goods and transport vehicles. To bring the promised benefits of greater economic growth, more jobs and lower consumer prices, uniform implementation is essential. A key component of the Regional Trade Capacity Building Program would be to focus on common measures to enhance trade facilitation between member states and train border management personnel in their application.

**Figure 3.9: Triangular Benefits of Corridor Management Organizations**




12 PIDA Phase 1 Draft Report, Transport Study: "Review of Existing Infrastructure" page 10.

This would include harmonization of sanitary and phyto-sanitary standards (as UEMOA states have recently done), quarantine systems, crop inspection and food safety inspection systems, certifications of origin and other measures to bring consistency in application of ETLS regulations.

It would also involve the consistent capture of economic trade data, making use of ASYCUDA customs software which has now been uniformly adopted among MRU states, and taking advantage of other ICT tools and technology support through ECOWAN to introduce speed and efficiency.

Even though Sierra Leone and neighbors have formally adopted ETLS, it actually takes practice and dedicated effort to implement uniformly and adhere to it for the purpose of creating an environment hospitable to trade. For example, PIDA has observed that the rules of origin cause numerous confrontations between exporters and customs officials and these can be interpreted differently on two sides of a single border.

**Box 3.11: Borderless: Removing Trade Barriers in West Africa**

BORDERLESS
Removing trade barriers in West Africa

The ETLS says that the ISRT logbook and the guarantee system are for transit goods and are to be prepared and paid in the country where the transit originates. But private sector respondents said the reality is different: A new logbook and an additional bond are required at every border they cross with transit goods. Today, a trader sending a truckload of maize from Ghana to Benin, valued at $3,000, must purchase three logbooks and post a bond guarantee, one at each border.

In Burkina Faso, $80,000 of cashew kernels was recently purchased from farmers and sent to Togo for export. The Togo authorities charged $400 for a customs bond, but under the ETLS there are no customs fees for Togo on goods produced in Burkina Faso, so there should have been no bond.

While common border facilities will help to diminish such problems, training and systematic effort around a shared objective to enhance the conditions for trade are required. The accompanying text box reproduces an example of problems observed by the Borderless, an NGO established to remove trade barriers in West Africa. Borderless observes that "preliminary findings show that none of the ECOWAS Member States is fully implementing the ETLS protocols." [13] This explains the need for a regional trade capacity building program and establishes justification for its support by development partners.

### EVALUATE APPROACHES TO ENABLE PSP IN BORDER FACILITY MANAGEMENT

As mentioned earlier, PIDA recommends that African states make operational "One Stop Border Posts" on key corridors or border locations by having Border States jointly mandate the implementation of agreed facilitation policies.

This is an area where, once again, the UEMOA bloc of countries has moved ahead of other West African nations to find practical means of implementation and enabling the entry of private participation in the operation of such facilities. Termed "Postes de Contrôle Juxtaposé" or Juxtaposed Border Posts, Regulation # 15/2009/CM/UEMOA adopted in December, 2009, established the legal regime by which border facilities could be established and operated by the private sector at borders between UEMOA states.

MRU countries might like to consider the UEMOA model, particularly if they are concerned that greater emphasis on regional trade might multiply opportunities for graft or corruption.

The UEMOA regulations specify that each State will acquire and designate a plot of land on which the facility will be established which it agrees to transfer to UEMOA. It then designates areas within the multi-hectare compound dedicated to "state functions" of each country, such as security and immigration matters. It then assigns other functions to the singular management of the border post operator, including weighbridge operation, use of scanning equipment for customs evaluation, trade statistics assessment and collection, and a host of other trade facilitation measures such as storage, maintenance or transport services.

This section has identified the trade and transport infrastructure package and associated Action Plan of reform measures that would serve to sustain investment and exert a beneficial impact on the environment for cross border trade.

The next section turns to examine an extensive investment package of power sector infrastructure. This package is identified as an essential "base case" investment for the agricultural food crops sector in order to provide critical energy across the national territory to develop agro-industry within the interior of the country where primary commodities are produced. This will create jobs and reduce poverty in locations which most need that impact.

### ADAPT TRADE POLICY TO SANCTION REGIONAL TRADE

As was noted in Chapter Two, Sierra Leone's National Export Strategy is virtually silent on cross-border trade and while it is strongly supportive of numerous measures that will serve to develop exports, these could equally benefit the flow of regional trade. It is therefore recommended that both the finalized National Trade Policy and the NES be amended to incorporate explicit mention of regional trade and thereby fill a policy vacuum which currently exists.

## ACCOMPANYING MEASURES FOR MINING CLUSTER DEVELOPMENT

### PURSUE POLICY, LEGAL & REGULATORY HARMONIZATION AMONG CORRIDOR STATES

The ECOWAS Harmonization

13 www.borderlesswa.com; "Filling the Gaps in the ECOWAS Trade Liberalization Scheme

Directive touches upon a number of issues in the policy, legal, regulatory and institutional spheres and the following paragraphs seek to portray the particular benefits of synchronization to corridor countries.

Land Acquisition and Usage Rights and Environmental Protection. Guinea, Sierra Leone and Liberia share a common interest to jointly protect the Upper Guinea rainforest habitat from further depletion as this habitat is critical to preserving the rainfall and climatic patterns on which each economy depends.

Indeed, habitat preservation is a public good which delivers value not just to the sub-region, but to all ECOWAS countries dependent upon the Upper Guinea watershed. Some mineral deposits have been identified in environmentally sensitive locations within this broader habitat which spans all three States and undoubtedly more could be found with further prospecting. The ECOWAS Directive encourages Member States to designate certain land areas a "No Go" Zones in order to limit the environmental damage that would occur if developed.

In applying this provision, it makes sense for all three countries to participate in the designation of "No Go" areas so that all countries can share the "opportunity loss" burden of leaving some areas free of development as well as the common reward from environmental protection.

Also, regardless of the legal framework for land ownership in each Member State, it makes sense for the countries to specifically harmonize their land use rights in the minerals sector so as not to permit differences between investment environments to enable private investors to drive a wedge between them. A related and practical decision for States to make is whether to have a single "Reclamation Fund" for all corridor-designated mining sites to deal with the mine closure and reclamation costs at the end of a mining life-cycle, or whether to have one in each country. Certainly a single fund will cut down on total administrative and auditing costs and would make procedures simpler for investors.

Matters that Impact the Mining Sector Investment Climate. It would be too much to expect corridor states to harmonize all aspects of their respective business climates, but there are several areas where each state would likely adapt to the mining sector in any case and this provides a particular window where harmonization will serve each national interest and the collective good. For example, qualifications and terms for initial issuance of prospecting licenses and extraction permits should be made as close to identical as possible.

This would then make it possible to enforce consistent standards of behavior on the private sector side, including reporting standards and penalties for false or misleading records, transparency in business dealings and the terms on which licenses can be revoked if the standards are contravened.

Related areas for harmonization would be the fiscal regime applicable to mining sector investment, expected standards of corporate social responsibility (to consult, involve and deliver benefit to the local communities where mines are located) and financial instruments to feed Socio-Economic Development Funds for the future. Also, because they are all "fragile fringe" countries, foreign direct investment is particularly likely to be swayed by the offer of "Stability Agreements" wherein States traditionally provide investors reassurances to safeguard against adverse effects of future changes in domestic legislation, level of payment of royalties, taxes and duties on imports. If such an Agreement could be developed to be applicable corridor-wide, and measures are taken to get the template ratified by each States' national parliament or equivalent, this would provide a powerful message to investors about the stability of investing in a previously fragile corridor.

**Approaches to Share Knowledge and Save Costs within the Corridor.** Each Member State has an interest in achieving compliance status with the Extractive Industries Transparency Initiative. Liberia is furthest ahead on this front and has already tackled many of the issues that Sierra Leone and Guinea still need to address in gaining their EITI certification as soon as the next opportunity arises.

Having failed to pass in its first attempt, Sierra Leone could possibly advise Guinea of what to expect and what to avoid and might also gain from Liberian knowledge on how to tackle the thorny areas of greatest political and economic sensitivity. ECOWAS also recommends that each State take measures to appoint competent expertise to investigate, audit and report on the activity and ownership of mining companies.

This is not only costly to Member States but it is difficult to vest such an organ with independence and credibility in perception and in fact. By combining forces to establish one single supreme audit agency for the entire corridor, and cross-staffing it with nationals from all countries, overhead costs could likely be minimized and the perception of independence could be enhanced, thereby improving relations with the private sector.

# 7. Upgrading the environment for implementation of infrastructure investment

This chapter has identified the fact that there are many opportunities for investment and upgrading of infrastructure with the potential to both unite the country and to connect it better with the region. However, a key implication for Sierra Leone with respect planning a regional infrastructure investment plan is this: it is ***imperative that the national investment program keep pace with the planned regional infrastructure investment program*** so that the downstream benefits of regional economic integration are realized within the national economy at a brisk pace.

This recommendation flows from the analysis of conflict drivers and vulnerabilities to instability which was presented in section 1.1 of this chapter. This means, for example, that inter-regional power connection investments, without rural electrification (which is an inherently national investment), would be inadvisable. The same would apply to inter-regional investment in an ICT submarine cable without rapidly developing the concomitant terrestrial delivery pipe. In a similar vein, it is important that investments designed to support agricultural productivity gains give thought to implications for intra-regional trade as well as extra-regional trade. Sierra Leone is advised to remain vigilant in seeking harmony in the twin programming of both regional and national investments.

The other conclusion which clearly emerges from this report and the opportunities presented in chapter three is that the Government of Sierra Leone is highly receptive to private sector participation in the economy. Not only does this apply to FDI, Diaspora and resident national investment in agricultural production, mining and other productive sectors of the economy, but GOSL is also highly favorable to private participation in infrastructure. Measures to enhance the environment and effectiveness of PPPs for infrastructure are discussed below.

## MEASURES TO ENHANCE THE ENVIRONMENT FOR PUBLIC PRIVATE PARTNERSHIPS

In order to ensure that PPP projects and programs are successful, sustainable and able to achieve their economic and social objectives, governments are increasingly relying on PPP Units to manage and guide PPP programs. Making the right choices as to what functions such PPP Units should perform and how they should interact with line agencies responsible for service delivery is critical to ensuring that they add value and fit into existing governmental processes. Whereas the tasks associated with the PPP life-cycle are quite standard in all PPP programs, the role of the PPP Unit in performing those functions varies greatly from jurisdiction to jurisdiction. In some countries, specialized PPP Units provide only advisory services and establish policy; while in others, the Units are executive in nature, heavily involved in transactions and project implementation. Sierra Leone chose the latter model for its National Committee for Privatization and has now decided to opt for the advisory model in formalizing its development of a PPP path. The advantage this will offer is that it will involve the Line Ministries to a greater degree in the upstream sector preparation and reform measures which are often essential to precede successful PPP arrangements.

Although there are increasing efforts to establish standardized guidelines for institutional arrangements in support of PPPs, for all practical purposes, PPP Units should be created to compensate for existing institutional weaknesses that limit a government's ability to manage a PPP program effectively and efficiently. That is to say, there is no single "one-size-fits-all "formula for establishing a successful PPP Unit. Governments in different countries will suffer from different institutional weaknesses in PPP-related activities (i.e., procurement, contract enforcement, promotion, etc.) and therefore, PPP Units in different countries will require different structures and competencies. In other words, PPP Units do not respond to a cookie-cutter formula, but must be structured in response to country-specific program needs. In short, international experience in both developed and developing economies has shown that key to a successful PPP Unit is to match its competencies with the needs of the PPP program. The random assignment of responsibilities to a centralized unit may create institutional rivalries or confusion and threaten the specialized unit's ability to perform its functions adequately.

Sierra Leone's draft PPP legislation intends that Line Ministries have primary responsibility to drive PPP transactions in their respective sectors but that they will be advised and supported in this task by a PPP unit with powers to "recommend" the appropriate approach. Although PPP legislation has been prepared and approved by Parliament, it has not yet been ratified by the President as certain institutional factors are still under consideration.

Given this, the following suggestions are offered for further consideration. These could serve to help the nation advance with confidence in the promulgation of its PPP Act and in ushering in a new era of Greenfield investment in infrastructure.

GOSL is advised to be highly cautious about use of government guarantees or absorption of risks in order to bring attractive PPP projects to closure. Experience gained elsewhere underline the wisdom of situating PPP units within the national treasury or a debt management unit of government both because of the technocratic capability which resides in such a unit and the better capacity to anticipate the consequences to public sector finance in situations where demand estimates do not materialize as planned and government absorbs risk of this type through contingent liabilities that arise from a contract.

Some countries have found it helpful to tap the knowledge and experience that has been built up over time in the personnel charged with managing a privatization function. Sierra Leone may want to consider whether there could be some type of twinning arrangement between NCP and the new PPP unit in order not to lose the benefit of experience gained and capacity built in the domain of attracting the private sector to invest for delivery of public goods and services. Finally, it is recommended that GOSL consider undertaking broader consultations with national stakeholders, private investors and development partners before promulgating the Act into law ■

# REFERENCES


2010 CPIA Rating: Country Worksheet Write-Up for Sierra Leone, African Development Bank

A Strategic Approach to Fragile States, US Agency for International Development, 2004

A Study on the Private Sector, Economic Development and Integration in the ECOWAS Region, Prof Koffi Nti, Accra, October 2010

Addax Bio-Energy Project Appraisal Document, December 2010, AfDB

AFDB/IDA/IFC Joint Assistance Strategy 2009-2012, ORWB November 2009

Africa Development Indicators (website database) The World Bank, 15 March 2010.

Africa Infrastructure Country Diagnostic. "Overhauling the Engine of Growth: Infrastructure in Africa," Vivien Foster, Sept. 2008

African Development Bank Group Medium Term Strategy 2008 - 2010, AfDB

African Statistical Yearbook 2010, AfDB and African Union and Economic Commission for Africa

Africa's Prospects for the New Millennium, Dr. Samuel Ofori Onwona, Global Future

Agricultural Sector Rehabilitation Project (ASREP) Appraisal Report, OCAR AfDB, November 2004.

Agricultural Statistics Bulletin, Volume 1, Planning, Evaluation, Monitoring and Statistics Division of Ministry of Agriculture ,Forestry and Food Security July 2009

An Agenda for Change: Second Poverty Reduction Strategy (PRSP II) 2008-2012, Republic of Sierra Leone

CAADP Compact to Support the Implementation of NSADP, September 2009

CAADP Post Compact Review Sierra Leone: Technical Review Report. June 13, 2010, Dakar.

CAADP: National Sustainable Agriculture Development Plan (NSADP) of Sierra Leone, Sept. 18 2009, Republic of Sierra Leone

Charter of the African Confederation of Professional Artisanal Fishing Organizations

Concepts and Dilemmas of State-building in Fragile Situations: From Fragility to Resilience, OECD Journal of Development 2008 Vol 9, No. 3

Convention A/P2/5/82 Regulating Inter-State Road Transportation between ECOWAS States

Cooperative Management and Development of Trans-boundary Water Basins to Facilitate Regional Integration Economic Development in the ECOWAS Region, RISP Background Paper, Nov 2010, AfDB

Core Welfare Indicator Questionnaire Survey, Final Statistical Report, November 2007; DfID and Government of Sierra Leone

Cross-border Trade and Food Security: Liberia and Sierra Leone. USAID/FEWSNET, May 2010

Decent Work Employment Programme, Ministry of Labor and Social Affairs, January 2011, Republic of Sierra Leone

Drivers of Conflict in Africa and How to Avoid New Conflicts, Institute for Security Studies, Nairobi (Draft)

Economic Bulletin 2010, Ministry of Finance and Economic Cooperation with TA from JICA, May 2010

ECOWAN Project: Preliminary Feasibility Study for Terrestrial Fibre Optic Backbone Route and Implementation Plan in Sierra Leone, Ministry of Information and Communication, Feb 2011

ECOWAS Commission Strategic Plan 2007 - 2010, May 2007, ECOWAS

ECOWAS Ports and Trade Facilitation, Background Working Paper for the Development of RISP in ECOWAS Region, Nov. 2010, AfDB

ECOWAS Strategic Plan 2007 - 2010, May 2007

E-Government Readiness Survey Report, Ministry of Communication and Information, Republic of Sierra Leone, 2009

Energy and Power Study to Facilitate Interregional Trade and Exports in the ECOWAS Region, RISP Background Paper, November 2010, AfDB

Engaging the Private Sector in African Infrastructure, Celine Kauffmann. NEPAD-OECD African Investment Initiative, December 2008

Etude d'Evaluation des Appuis Francais a l'Integration Regionale en Afrique de l'Ouest: Le Cas de l'UEMOA, C2G Conseil, Fevrier 2010

Feasibility Study on the Man (IC)-Yekepa(L)-Nzerekore(Guinea)-Buchanan(L)-Monrovia (L)-Bumbuna (SL) - Linsan(Guinea) Interconnection Project, Volume 4 , January 2010 WAPP

How to Increase Sound Private Investment in Africa's Road Infrastructure: Building on Country Successes and OECD Policy Tools, Carole Biau, Karim Dahou, Toru Homma, Dec 2008

Inception Report, Study on Programme for Infrastructure Development in Africa, SOFRECO Consortium July 2010

Increasing Private Investment in African Energy Infrastructure. NEPAD-OECD African Investment Initiative, November 2009

Infrastructure and Growth in Africa, Policy Research Working Paper 4914, The World Bank, Cesar Calderon, April 2009.

Institutional Support to the Roads Sector: Preparation of a Vehicle Overload Policy and Control Plan, Roger Colin, November 2010

Investment in Transport Infrastructure in Africa, NEPAD-OECD Africa Investment Initiative, Biau, Dahou and Homma, December 2008.

Investment Policies and Incentives for Private Sector Promotion in Agriculture in Sierra Leone, January 2009

Joint IDA-IMF Staff Advisory Note on the Second Poverty Reduction Strategy Paper of Republic of Sierra Leone, Sept 17, 2009

Joint Progress Report on the Agenda for Change, January 2009 - June 2010: Stability- Opportunity-Growth It's Time, ROSL and UN Peacebuilding Commission, Sept. 2010

Liberia: AfDB-WB Joint Assistance Strategy 2008-2011 and Eligibility to the Fragile States Facility, AfDB ORWB November 2008

Mid-Term Review of the 2005-2009 Results Based Country Strategy Paper and Request for Access to the Fragile States Facility, ORWB AfDB, Nov. 2008

Ministry of Trade and Industry Strategic Plan 2009 - 2012, August 2009

Multinational: NERICA Rice Dissemination Project, Project Appraisal Report, African Development Fund June 2003

National ICT Policy of Sierra Leone, Ministry of Communication and Information, Republic of Sierra Leone, May 2009

National Sustainable Agriculture Development Plan 2010-2030: Sierra Leone's Comprehensive African Agriculture Development Programme, 28 August 2009

National WASH Policy Implementation Strategy, Republic of Sierra Leone, December 2010

National Water and Sanitation Policy, Republic of Sierra Leone, December 2010

Power Interconnection Project (IC-Liberia-SL-Guinea)

Preliminary Feasibility Study for Terrestrial Fibre-Optic Backbone Route and Implementation Plan for Sierra Leone, Ministry of Information and Communication, Feb 2011

Private Sector, Economic Development in the ECOWAS Region, October 2010, Mme. Cor Sene, African Center for Economic Transformation

Project Appraisal Document for a Proposed Credit to the Republic of Sierra Leone for West Africa Regional Communications Infrastructure Project, APL 1A, Dec 22, 2010

Project Appraisal Document for Proposed Grant to Mining Technical Assistance Project, Nov 3, 2009, World Bank

Project Information Document, Concept Stage Report No. AB 5698 Youth Employment Support Program, The World Bank, April 27, 2010

Promoting the Free Movement of Transport, Goods and Persons: 2nd Joint Report on Road Harrassment, Borderless, West Africa Trade Hub, USAID, ECOWAS, World Bank, UEMOA

Regional Integration for Growth and Poverty Reduction in West Africa: Strategies and Plan of Action, WAEMU Commission & ECOWAS Secretariat, Dec 2006

Regional Integration Strategy Paper for West Africa 2011-2015, ORWA/ORWB First Draft, December 2010

Regional Partnership Compact for the Implementation of ECOWAP/CAADP, ECOWAS Commission

Regional Road Transport and Transit Facilitation Programme in West Africa, Volume I Final Report, June 2006, Roughton International, UK

Rescuing a Fragile State: Sierra Leone 2002-2008, Edited by Lansana Gberie, LCMSCD Press of Wilfrid Laurier University, Ontario, 2009

Rethinking the (European) Foundations of Sub-Saharan African Regional Economic Integration: A Political Economy Essay; Draper, Peter. OECD Dev't Center working paper No. 293, Sept. 2010

Revised National Fisheries Policy and Implementation Strategy, 2010. Ministry of Fisheries and Marine Resources

Revitalizing the Mano River Union: A Briefing Paper for the Peacebuilding Commission, Mike McGovern, International Peace Institute

Service Delivery in Fragile States in West Africa: Case Study of Education, Health, Water and Sanitation, Atieno, Mitullah, Jama, Institute for Development Studies, Nairobi, Dec 2010

Sierra Leone Country Portfolio Performance Report, ORWB October 2009

Sierra Leone Decent Work Country Programme (2010-2012), November 2010, ILO and GOSL.

Sierra Leone Food Security Logical Framework Matrix, October 8, 2009

Sierra Leone National Energy Strategic Plan, Republic of Sierra Leone, September 2009

Sierra Leone National Export Strategy 2010 - 2015, SLIEPA and Commonwealth Secretariat, June 2010

Sierra Leone National Rice Development Strategy, Coalition for African Rice Development 2009

Sierra Leone Public Expenditure Review, Report No. 52817 SL, The World Bank, October 2010

Sierra Leone Roads Authority Strategy and Investment Plan 2009-2012

Sierra Leone Trade Policy Action Program, June 2010

Sierra Leone Trade Policy, Ministry of Trade and Industry, June 2010 (Still draft)

Sierra Leone: Adding Value Through Trade for Poverty Reduction , A Diagnostic Trade Integration Study, UNDP October 27, 2006

Sierra Leone: Agricultural Growth, Poverty Reduction and Food Security. Past Performance and Prospective Outcomes. NEPAD, ECOWAS, Sierra Leone CAADP

Sierra Leone: From Conflict to Democratic Rule, IDA at Work Paper # 52002, August 2009

Sierra Leone: Preparation of a Vehicle Overload Control Policy and Action Plan, Final Report to SLRA, Louis Berger, Nov. 2010

Sierra Leone: The Political Economy of Internal Conflict, Christopher Clapham. Netherlands Institute of International Relations, Conflict Research Unit, July 2003

Staff Report for the 2010 Article IV Consultation, First Review of the Three-Year Extended Credit Facility, International Monetary Fund, Novermber 2010

Study on Programme for Infrastructure Development in Africa (PIDA)-- Inception Report, SOFRECO, July 2010

Study on Programme for Infrastructure Development in Africa (PIDA)-- Phase 1 Report, SOFRECO

Study on Programme for Infrastructure Development in Africa (PIDA) Phase 1, Sofreco-Consortium, April 2011.

The Africa Infrastructure Development Index, Economic Brief Volume 1 Issue 1, African Development Bank, 25 April 2011

The Enhanced Integrated Framework: Supporting LDCs to Develop Trade, www.integratedframework.org, WTO Secretariat

The State of Food Security and Nutrition in Sierra Leone, World Food Program, February 2011

Tourism Statistics Bulletin 2010, Statistics Sierra Leone, May 2010

Trade, Regional Integration and Economic Development in the Economic Community of West African States (ECOWAS), E.O. Ogunkola, Ibadan.

Transport Corridors to Facilitate Interregional Trade and Exports in the ECOWAS Region, RISP Background Paper, November 2010, AfDB

Transport Prices and Costs in Africa: A Review of the Main International Corridors. Working Paper # 14 AICD, Supee Teravaninthorn, Gael Raballand, July 2008

Unleashing the Talent of our People: A Strategy for Private Sector Development 2009 - 2013, Ministry of Trade and Industry, Nov. 2008

USAID Assistance to the Agricultural Sector in Sierra Leone

USAID Assistance to the Governance Sector

USAID Summary Major Programs, FY 10-FY11, November 2010

West Africa Mineral Sector Strategic Assessment: An Environmental and Social Strategic Assessment for Mano River Union, The World Bank Report No. 53738, March 31, 2010

West Africa Power Pool , www.ecowapp.org

Whole of Government Approaches to Fragile States: DAC Guidelines and Reference Series, OECD 2006

Witness to Truth: Report of the Sierra Leone Truth and Reconciliation Commission, Volume 2, GPL Press, Accra Ghana, 2004

Youth Unemployment and Conflict in Africa: Evidence from Liberia and Sierra Leone, Kinyanjui and Mbatia, University of Nairobi, December 2010

# NOTES

# NOTES

# NOTES

# NOTES

# NOTES

# NOTES

# NOTES

# NOTES

# NOTES


BANQUE AFRICAINE DE DÉVELOPPEMENT
AFRICAN DEVELOPMENT BANK
AFRICAN DEVELOPMENT FUND
FONDS AFRICAIN DE DÉVELOPPEMENT

**www.afdb.org**